

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

In the Matter of:)
) Docket No. 96-RDD-1890
Implementation of Restructuring)
Legislation (Public Utilities)
Code § 381, [AB 1890]): RD&D)
)

COMMITTEE HEARING

RE: RD&D STRATEGIC PLAN REPORT

Thursday
April 17, 1997
10:08 A.M.

1516 Ninth Street
Sacramento, California
Hearing Room A

REPORTED BY:

S. RICE, CER 00160

COMMISSIONERS PRESENT

DAVID A. ROHY, Presiding Member

ROBERT A. LAURIE

JANANNE SHARPLESS

STAFF PRESENT
(Alphabetically Listed)

David Abelson

Mike DeAngelis

Bob Eller, Advisor

Ronald Kukulka

Tom Tanton, Advisor

ALSO PRESENT
(Alphabetically Listed)

Lee Ann Alio, Southern California Edison

Larry L. Berg, Larry Berg & Associates

Mark Berman, Davis Energy Group

David A. Berokoff, Southern California Gas Company

Kenneth R. Broome, Power Wheel Corporation

Roderick A. Campbell, The Translex Group

Harvey L. Canter, SAIC

Sheryl Carter, Natural Resources Defense Council

David Duchane, Los Alamos National Laboratory

Ronald B. Edelstein, Gas Research Institute

Rich Ferguson, Center for Energy Efficiency

Vincent B. Fiore, Gas Research Institute

Wayne R. Gould, Southern California Edison

John Guardalabene, Pacific Gas and Electric

George A. Hay, III, Collaborative Advanced Gas Turbine, UC

Ted H. Heath, Southern California Edison

Roger Hill, Sandia National Laboratories

Robert L. Judd, Cal-Tech Management Association

Kurt Kammerer, San Diego Gas and Electric

Steven Kelly, IEP

Daniel E. Kincaid, Gas Research Institute

Betsy L. Krieg, Pacific Gas and Electric Company

ALSO PRESENT
(Continued)

H. M. "Hank" Leibowitz, Exergy, Inc.

Alan Lindstrom, Pacific Gas and Electric

Gilbert R. Marguth, Jr., Sandia National Laboratories

Gary Matteson, University of California

David Modisette, University of California

William Nadauld, Exergy, Inc.

Thomas D. O'Connor, Southern California Edison

Alvin S. Pak, Electric Power Research Institute

Alan D. Pasternak, Lawrence Livermore National Laboratory

Neil R. Raskin, CeraFilter Systems

Ted Rieger, California Energy Markets

Elaine Russell, Resource Insights

Max Sherman, Lawrence Berkeley Laboratory

Frank Spasaro, Southern California Gas Company, California Utility
Research Council

Stanley S. Sussman, EPRI

Theodore T. Tsotsis, University of Southern California

Steven R. Vosen, Sandia National Laboratories

Tony Wetzel, Thermal ECotek Corporation

Lisa Yamamoto, Los Angeles Department of Water and Power

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P R O C E E D I N G S

PRESIDING COMMISSIONER ROHY: Good morning, ladies and gentlemen and welcome to the Energy Commission's Hearing on Public Interest RD&D. The purpose of today's hearing is to discuss the strategic plan report on implementing the RD&D provisions of AB 1890.

Before we begin, I'd like to introduce the people on the dais. To my right is Commissioner Jan Sharpless. I believe Commissioner Bob Laurie will be joining us in a few moments. And to my left my advisors Tom Tanton and Bob Eller.

For most of you here in the room, I don't have to explain the process of how the report that we're here to discuss today was generated, but for the record I will briefly recap the events that led to today.

AB 1890, the electric industry restructuring bill, passed in August of last year and was signed by the governor in September of last year. It provided for public interest RD&D paid for by a public goods surcharge on electricity purchased by customers of the three investor owned utilities.

At an En Banc Hearing on October 16, 1996, the California Energy Commission determined that a plan would be developed for implementing the public interest RD&D provisions of AB 1890. In that plan the CEC would provide input to the legislature regarding the appropriate administrative and expenditure criteria for this program. The CEC then assigned these matters to its RD&D

Committee with the directions to first conduct collaborative public hearings and workshops on these topics, and, second, to prepare a proposed RD&D plan for the full Commission consideration and adoption by mid 1997.

Seems like a long time ago, doesn't it, when you started.

Two public hearings and seven public workshops have been held since then to formulate and discuss the plan that we are here to discuss today. One only has to look at the lengthy list of prominent organizations and individuals that not only participated in this work, but then lent their names to the final product as sponsors of the strategic plan report to know that the State of California received substantial public input. I believe there's 70 signators to this report that we have here today.

The Committee has heard of the struggles, the compromises, sometimes the less than fun parts of what you folks went through, but were all necessary to get to where you are today.

At least one objective in this report was published with four options so that the Committee had a choice. So we understand the struggles that you went through to reach consensus.

It is my plan to hear the members of the working group today, starting with Staff, and then to ask questions about the report from the Commissioners, and then to allow members of the public to comment on the report. That may agree with the agenda that's published or may not, but the agenda will prevail.

Subsequent to this hearing the RD&D Committee will prepare a draft committee report for comment with full Commission hearing for final adoption at the appropriate time. I think we've met the

original schedule deadlines that we set last fall.

Our next task then is to develop the language for the legislature for administrative and expenditure guidelines. Mr. DeAngelis will discuss this in his presentation today.

Following our submittal of that language, you'll begin work immediately on the implementation plan necessary to have a functioning program by January 1, 1998.

Mr. Mike DeAngelis of the RD&D Staff, and Mr. Tom Tanton from my office will be working with the RD&D Committee to assure that all plans are made and implemented in a timely fashion. And in many cases Mr. Tanton will represent me in meetings with you on several of these topics.

Before we begin the hearing today, though, I have one thing that I must do for all of you is thank each and every one of you who contributed to this plan. It was hard work. You contributed hours and days over a protracted period of months. Probably more than I have seen since I've been at the Commission for a single report.

It was truly a lot of effort over a protracted period of time. And I know that took the time out of your busy schedules, and from my point of view and for the Commission I want to thank all of you for the work that you did and for coming to a consensus report in a timely fashion.

And I'll thank Staff, especially Mr. Michael DeAngelis, who somebody told me was given the title "herder of the cats"; is that the title I heard? But everyone I've talked to on the working group side said you did a great job in keeping the group together

so I'd like to thank you especially for that. And the rest of Staff who contributed to all these efforts.

Any comments, Commissioner Sharpless?

COMMISSIONER SHARPLESS: Yes, I guess just very briefly.

I've not been as involved in this activity, although through the Electricity Report proceedings for the 1996 Report and obviously through the comments that we've been making at the CPUC, all Commissioners have in some way or another been involved in the RD&D efforts, and I look forward to hearing what's discussed today so that I can appreciate perhaps more than what I read in the documents some of the flavor of what the issues are that we are facing.

I know we have a rather monumental task ahead. I think Dave has already indicated that many people have been struggling with these issues. And, again, I'd like to recognize the Staff, Dave Abelson and Mike DeAngelis, for the yeoman work, and others, who I'm less familiar with, but I know they've been involved.

I'd only like to also point out that in addition to being involved in the ER 96 Electricity Report, '96 proceedings that have been dealing with a multiple of issues, I've also been sitting on the Renewables Committee and dealing with the energy efficiency issues. And RD&D often and constantly comes up in those proceedings as well, so I have an interest about how these issues are going to be integrated and tied together.

Obviously they are, and I think at some point in time as we deal with the issues that we have before us we will begin to talk more about the linkages that these programs have one with the

other.

And I'd just like to thank Commissioner Rohy as the one and only presiding member at this point on the RD&D Committee for his yeoperson job as the Commissioner for all of the efforts that I know personally he's done in this area. And so I look forward to the discussion today, Dave. Thank you.

PRESIDING COMMISSIONER ROHY: Thank you.

Mr. DeAngelis, would you like to begin on the agenda with summary of the advisory group process.

MR. DeANGELIS: Yes. Commissioners, thank you very much for those earlier comments. I appreciate them very much.

The process that we went through I think was a difficult process for all of us, but the credit belongs to those that participated in the process. We had to address a number of very difficult issues. And I think probably about a month before we finished the report it didn't look like we were going to finish the report, but we did. And I think that all of us deserve a lot of credit for participating in that, for understanding where the difficult issues were and not running away from them and actually trying to address them. And I think we did do that in a collaborative way which is what our goal was.

What I'd like to do is to spend some time, I have a few overheads, and cover a little bit of background information, and then spend time actually going through the report itself summarizing it, and where I expect to conclude is really with a schedule for implementation of the program.

The first overhead that I have up there is really to state

that AB 1890 RD&D provisions really required three major accomplishments before it could be implemented in 1998. One of the first major decisions that was needed was a decision by the Public Utilities Commission on the split of \$62-and-a-half million for overall public interest RD&D and for public interest T&D R&D.

On February 5th the Public Utilities Commission did make the decision and provided \$61.8 million to the California Energy Commission for overall public interest RD&D.

The second major activity that was necessary to implement the R&D provisions of AB 1890 was for the Energy Commission to really develop and implement this new public interest RD&D program. And that is what this hearing is all about, and that is what much of the workshops that were held and hearings that have been held in the past number of months.

A third very important activity also that is in AB 1890, is that the legislature needs to provide administration and expenditure criteria before the Commission can implement this public interest RD&D program. And that's the third activity, and that is an activity which the RD&D working group has provided input to.

And I think I would like to mention for everyone who is here that there is a draft piece of legislation which has been drafted internally here at the Commission which everyone in the audience should pick up a copy of and read because it is the our current draft input to the legislature for administration and expenditure criteria.

The next transparency.

I'd like to cover the process a little bit. If we include a mid-October overall AB 1890 hearing that was held which included R&D as part of the agenda, there's been three Commission hearings related to this topic, to date this will be the fourth. After the second, the first full hearing which was in December, there was a charter really given to Staff, and that was to collaborate with stakeholders and try to produce two products.

And the products would be to provide input on the administration and expenditure criteria; and, secondly, to also work to help develop a California public interest RD&D plan collaboratively.

So that was the charter given to us in December, and I'm pleased to say that we have met that charter completely.

There have been over 70 organizations and attendees in these workshops that we have held since December. We've had seven full workshops. There have been conference calls that have been held in between the workshops to get the work done.

And if I were to categorize the organizations who attended these workshops, I would put them into several categories, including major RD&D institutions inside and outside the State of California, private RD&D firms who are involved in doing RD&D, there are public interest groups including environmental groups and science base groups that have been involved, and our California investor owned utilities were actively involved, as were at least two municipal utilities and a variety of government agencies, local, regional, state and federal government agencies, have had some involvement in the process.

Next slide.

Our accomplishments to date is that we did spend time; people were very frank. I think I told everyone at the beginning of these meetings that for this to work everyone had to put their stake in the ground and state their opinions and their views for this to work out properly. And as the workshops proceeded what we found out is that there was no problem with stakeholders in putting their stake into the ground. They clearly did.

There were a number of issues. I will not go through all of the issues here in the presentation. An example of one of the issues was very clearly the need for administrative streamlining to properly implement this program, particularly related to the cost and overhead associated with contracting for RD&D.

Again, one of our charter was to provide input to the administration and expenditure criteria. This was done I think more formally in the February 5th hearing that the RD&D Committee held. Primarily the input at that time were the mission and goals which I reviewed at the February 5th hearing.

The group also did complete the collaborative strategic level plan. We've called the group the Public Interest RD&D Advisory Group. And really the plan is comprised of four, I think, major areas which I'll cover a little bit in the subsequent slides. And they are the mission objectives, the RD&D focus areas, which a whole chapter was devoted to, how projects are selected, and then also governance and administration.

I covered the mission and objectives at the February 5 hearing so I won't spend a lot of time on the mission and

objectives. But what you see before you here is really the umbrella mission of the AB 1890 public interest RD&D program. We worked and agreed collaboratively that we would not restate the mission in the objectives because it applied to everything in the program and all of the objectives in the program since it is the umbrella mission.

As you can see from this that the mission does include, there's really two sentences as a part of the mission, it includes the definition of public interest RD&D that is in the legislation. That is to advance science or technology not adequately provided by competitive and regulated markets. And it also includes a broad statement that the RD&D through this program is to improve the quality of life of California citizen by providing environmentally sound, safe, reliable and affordable energy.

Next slide.

Again, the next slide shows four objectives. These are really objectives that relate to program content. And while the last three objectives more relate to the governing and administration of the program itself, the first objective I probably should discuss a bit because it did change from February.

As I mentioned in the February briefing one of the more significant issues was the definition of energy efficiency as a focus area. That discussion continued after February, and the group collaboratively pulled together and decided to add a focus area. The focus area that was added was environmentally preferred advanced generation, and to clarify that the energy efficiency focus area was an end use energy efficiency focus area. So we now

have four focus areas.

The only other objective that I would want to mention in this group in order to not be redundant with the February presentation is again the fourth objective, which I think, Commissioner Rohy, you alluded to a little bit earlier and said that there's options there, so that's really up to the Committee and the Commission as to which one to select or what variation of those three that the Committee chooses to select as an objective.

The next transparency.

These are the three governing and administration objectives. And I really won't cover those in any detail because they haven't changed since February. These are the same three objectives that were there before.

So the next transparency.

It's probably worth a little bit of time to talk about the focus areas a bit more. This really the most contentious area of discussion, I believe, in the RD&D working group was where the emphasis should be in the funding of RD&D. And these are the focus areas.

We had extensive discussions on this topic. We devoted a chapter to the report discussing the focus areas, and each focus area is discussed in the report with a definition statement and also what the issues are generically that the RD&D should address in each focus area.

And there were some objectives also stated for each focus area. And the objectives always referred to at least three areas. One an objective related to hardware R&D, an objective related to

information and analysis R&D, and an objective related to coordination with other R&D that is going on. So in all cases there were objectives in those areas for each focus area.

The renewable energy focus area very clearly defined solar, geothermal, biomass, water and wind.

The end use energy efficiency focus area is really addressing two types of RD&D. RD&D that would improve the, would address by reducing the energy input required by device or system per unit of output; or secondly, to do R&D which would conserve energy by reducing demand. That's really how we defined end use energy efficiency.

The third area's the environmentally preferred advanced generation area, the new area that was added. This is really to develop efficient electricity generation technologies using clean fuels. It includes advanced generation, electricity generation cycles, fuel cells, the next generation gas turbines are all included in this particular category.

The fourth category is environmental research. I think very clearly energy production, delivery and use does affect the quality of our air, land and water. The research here will help understand these environmental effects and also how to best address these environmental effects.

Finally I think the advisory group recognized that four focus areas was not enough, and that there was a strategic energy research area that was defined. This was not -- this was defined as a category and not necessarily as a focus area. And this is RD&D which cuts across the focus areas. It could be RD&D that

provides order of magnitudes, advances to technologies or to information.

Example of strategic energy R&D would be systems related projects, such as distributed generation, which, when appropriately placed after the technology is developed, can improve system reliability. That's an example of strategic energy research.

Next slide.

An area of discussion also with the group and included in the plan concerns RD&D projects selection. And I believe that it was unanimous from the group that it be a merit base selection process.

The first screen is clearly an eligibility screen, and what should be used in the eligibility screen is really the statutory definition. Once again, advancing science or technology not adequately provided by competitive and regulated markets. And, also, the mission objectives. So all projects should be consistent with the mission objectives.

The group did discuss and included in the report specific criteria that could be used by an expert knowledgeable group of reviewers to evaluate and rank projects. Again defining what merit base means.

We included six different categories of criteria. And there's a narrative which you could break out more specific criteria under them, but the public benefits area discusses improvements in environmental quality from the technology that could be developed for the RD&D, evaluating whether it uses

indigenous energy resources or not, whether they're cost savings to ratepayers and other public benefits, the quality of the research proposal itself. This is if it's technology base.

Does it appropriately address the key technology barriers with that technology? Does it unnecessarily duplicate other research that has gone on? Is there a vision for bringing this technology to market in the research by the researchers? Evaluate the cost sharing provided in the proposal? Is the budget adequate to get the work done? Is the time schedule adequate to get the work done? All of those sort of sub-criteria within the quality of proposal criterion.

Qualifications of the research team. Does the proposal have the appropriate skills and talents on the research team to get the work done? Is the past performance and track record appropriate, and evaluation of that as part of the job of the review team.

The next criterion is policy consistency. Is the proposal consistent with state energy policy? Is it consistent with the mission and objectives of the program?

And finally there is a preferences area as part of the criterion. And this is where the program could include and evaluate factors such as whether the research organization is located in California, whether the project is located in California, other preferences which the program may want to include in the evaluation of the proposals.

The final chapter in the report in the next slide is on governance and administration. The group discussed and proposed a name to the program called Energy Research California.

The first item discussed in this chapter is really that the governance must be consistent with the objectives. I think I mentioned earlier that there were three objectives that all addressed governance and administration.

There was discussion of the functions of Energy Research California. And I've listed functions there. Policy implementation is certainly one of that. The RD&D program for public interest needs to be on the same train going down the same tracks as state energy policy; but in addition, the Energy Research California should have the input to state energy policy that relates to the mission and objectives of the program.

Planning, that's what we've been doing here so far, but discussed in the report is an annual planning process with input from advisory committees and other stakeholders.

The RD&D funding and guidelines is an important function obviously. ERC, Energy Research California, is primarily an RD&D funding organization, and it does not do RD&D itself primarily. They need, because it is a funding organization, Energy Research California needs to develop the appropriate guidelines and funding mechanisms to meet the needs of RD&D. And that is discussed in the report.

Another function for Energy Research California is leadership and coordination. And really there's three areas discussed there. To use California RD&D resources fully, to bring those resources to bear in the program which creates benefits overall to the program, to leverage federal and other dollars in the program, to coordinate and collaborate specifically with a variety of

organizations, but also emphasized are the other AB 1890 programs of renewables and end use energy efficiency.

Very clearly this program, the RD&D program, needs to understand where the needs are in the market that the energy efficiency programs will be addressing through AB 1890 and the renewables programs will be addressing in AB 1890. So there needs to be that communication link.

In addition, those programs, as they continue, and if they continue in the future, needs to understand the RD&D that is coming out that can be applied to the marketplace through those programs.

Technical management is important function. The program will need to prepare solicitations, review proposals, manage projects, manage the advisory groups process that will hopefully be a part of this program. And of course, there's program administration that needs to be done, so the contracting, hiring and normal routines as part of a program. And an evaluation program is discussed, that there should be annual reviews of the program by an advisory committee, and, also, a periodic independent evaluation.

The advisory and review committees are discussed as generally here, not detailed recommendations. But the two levels which are described is a policy level, which is high level executives which include annual reviews of the public interest RD&D program to evaluate whether the program is moving down a path consistent with its mission and objectives and also update the policy for the program with recommendations annually.

And then another level, a technical level of review, which can help target the research in the program and create technical goals for various aspects or focus areas of the program, can help on an ad hoc basis in reviewing proposals to the program, and, also, reviewing the status of projects as they are completed.

The independent evaluation process is briefly discussed in the report. And I think the idea here is to keep the integrity and reputation of Energy Research California at the highest possible levels. And a group of independent, independent of Energy Research California, should evaluate the program periodically, and I believe there's a recommendation to have the first independent evaluation completed before July 1, 2001.

So that, I think, summarizes the report.

And the last transparency that I have up is really a schedule slide that I'll briefly review. The first item there is the CPUC decision on the funding split which was done on February 5th. The second is the collaborative strategic R&D plan. Our last meeting was on March 24, and it was completed on schedule.

Our next item on the schedule is one that the RD&D Committee has recently revised. This was before in June, but we've decided to bump up the date. Our expectation is that there be a Commission Strategic RD&D plan adopted on May 14, 1997.

Our expectation is that the legislative administration expenditure criteria be approved sometime this summer. Hopefully sooner rather than later because that will help us in implementing the program.

And as I mentioned earlier and as Commissioner Rohy alluded

to there are copies of our internal draft. And I do want to state that the copies of the legislation out there are internal. They've not yet been fully approved by our Commission yet. I think the Staff, of the copies that are out there, we'd like parties to look at that to review that.

And there is a fairly rushed schedule for us to get this approved, and we'd like your very quick review of the legislation with any comments submitted to us by tomorrow if possible. It is a short piece of legislation.

And, in fact, if you have any comments on it today, I know it's a little bit short notice for most all of you, but if you have any comments on that today, I think it's appropriate to mention them.

The strategic level --

MR. TANTON: Excuse me, Mike. You might want to make sure that folks know if they have sort of marginal notations that, you know, that would be helpful as well. I mean they'll have to put them in the form of a formal set of comments.

MR. DeANGELIS: Thank you for that. Yes, I think time is of the essence here.

In addition to the strategic level policy plan, there's also will need to be completed the operational plans. And I think some of that is alluded to in the report that was completed collaboratively.

We expect solicitations to begin in the fall of '97 and to continue into 1998 for this program and implementation, but we would like to get a good jump on it and at least have a

solicitation out in the fall. And we are hopeful that the initial contracts will begin to be approved in early 1998 for this program. So that's a general schedule for implementing this program, and that concludes my presentation.

PRESIDING COMMISSIONER ROHY: Thank you, Mike.

Commissioner, I'd like to hear other working people from the working groups comments. Would that be acceptable to you, and then we'll ask questions on the report as a whole.

COMMISSIONER SHARPLESS: [Nods affirmatively]

PRESIDING COMMISSIONER ROHY: If I can ask the people who put in blue cards, and I'll call your names, to have your comments be brief and not repetitive of previous comments. If you agree with what other people have said, say basically you agree with what's been said. If you have differences, I'd like to hear those so that we can get through these quickly.

I would rather do it this way and then have a good discussion of that afterwards. So I'd like you to limit your comments to five minutes or less here. We have quite a few commentators.

I'd like to start with Al Pak and Stan Sussman from EPRI. I don't know which of you is the speaker.

Come up to the table, please.

We'll have time for implementation later so if you only want to talk on the strategic plan right now. Or does Stan have to, is that a time issue with you?

MR. PAK: Stan is the one with the time problem.

PRESIDING COMMISSIONER ROHY: Okay.

MR. PAK: Thank you very much for taking us early,

Commissioner. Stan is a new grandfather. I know he appreciates the small favors of life these days more. So I'm sure he joins me in thanking you.

As one of the cats in this process, we add our meow to this strategic plan. We do support it. We are a signatory to it. There are some issues that we don't think are addressed in the strategic plan, and I'd like to address five specifically.

There are a number of recommendations that we have submitted in our written comments. Those constitute the important issues that are still before this Commission. There are five that I'd like to highlight today.

First of all, this Commission really ought to step forward and declare itself to be the program administrator. For some reason the Staff has been extremely self-effacing about identifying the Energy Commission as being the program administrator. We think it's going to be one of the first questions the legislature asks of you with respect to administrative and expenditure criteria. Who is running the program, and who is going to be held accountable for these funds in the program?

It is my understanding and belief that there is virtually unanimous agreement amongst the members of the working group that it ought to be this Commission. So we encourage you, if for no other reason than to assure that the important objective of making this program consistent with state energy policy, you, as the developers of state energy policy, ought to step forward and run the program.

Two, operational plan development. After looking at Mike's slide on the timing for the development for the operational plan, we would suggest a modification to that schedule. We believe that you ought to do the operational plan expeditiously. There are a number of issues that were deferred to the operational plan, and these are critical aspects of the administrative and expenditure criteria.

We believe that you ought to do this before you go to legislative committee hearings. Commissioner Moore, as he represented this Commission with respect to the renewable resource program, numerous times was asked by the members of the Senate Energy Committee recently to explain how the decisions concerning that program's expenditure criteria were developed. Frequently received the deference of the committee members as he explained that in a larger context the Commission had to exercise discretion in judgment in drawing the parameters and boundaries of that program.

I would suggest to you that the draft strategic plan you have in front of you today is just too sparse in the level of detail to survive the kinds of questions that Commissioner Moore received with respect to that program.

And as for the R&D program, we think that you are fully capable and have a good foundation upon which to develop that operational plan in the strategic plan. And we suggest that you do that as quickly as possible, otherwise you will risk legislative intervention. And having invested a good deal of time and effort in this process, EPRI would like to see the good work

done by the working group be embodied in this program. And we feel the only way you can do that is to present in greater detail the work of the group in your operational plan.

Third, intellectual property rights. One of the critical gaps and omissions in the draft strategic plan you have in front of you is there is not one wit about intellectual property rights.

You need to identify for the potential program participants what reservations the state would like to make with respect to the intellectual property developed in this program and what obligations the participants would have with respect to intellectual property rights.

It is the most critical aspect of research and development. Just as a small indication, intellectual property is the third largest section of the California State Bar. It indicates to you that there is a great deal of interest in what happens to intellectual property in this state. And I think it's going to be an important aspect of this program, and you ought to address the rights and obligations you would reserve for the state and for participants in this program.

Fourth, focus areas. I have addressed this issue previously in front of the Committee. We agree that the focus areas that were identified by Mr. DeAngelis are the right ones. However, our understanding of these focus areas is that they are not to be exclusive. They should be treated as included, including but not limited to.

There was an informal understanding developed within the working group that project proposals that fell outside the four

focus areas would have to meet a higher hurdle in terms of being accepted within this program. We are comfortable with that.

We believe that this Commission, if it agrees to be the program administrator, will keep its eyes on developing benefits for the State of California. And if you continue that focus, we think that worthwhile projects that may fall outside these focus areas will receive their proper due.

We have in the past suggested that electric vehicle research and research related to grid reliability are the kinds of important issues that fall outside of the focus areas but which should receive some attention from this program and some support from this Commission. We would reiterate those two areas as worthy again.

Fifth, we agree on advisory councils. We agree that you ought to have advisory councils. EPRI employs a number of advisory councils providing all kinds of different advice. They are constructed to meet their specific objectives. But we have one further recommendation, and that's that you include legislators or key legislative staff on at least one of your standing advisory committees.

The legislature, at least initially, will have a very high interest in how this program is administered. Including the legislator or legislative staff on these advisory committees will assure that you get a continuous and interactive feedback with the legislature. And we think that that can only benefit this program and convince them that it's being run correctly.

Finally, there is a brief mention of block awards in the

draft strategic plan. And there really isn't much detail concerning how all of that should be done. This may be one of those things that's easier to explain by example than it is in concept, so EPRI has been spending a lot of time developing the concept or a project proposal that we believe would be appropriate for block awards. So in the event you go in front of the legislature and are questioned about block awards, this may be a good "for instance."

So we have brought Dr. Stan Sussman, who is the director and principal scientist in our environment group, to describe for you the type of proposal we believe would be appropriate for block award. And if we could ask for an additional couple of minutes, we could have Dr. Sussman go through his example.

PRESIDING COMMISSIONER ROHY: Only because he's a new grandfather.

DR. SUSSMAN: Thank you. I appreciate the opportunity to address the Commission and to do it in this accelerated schedule. I won't comment any more on any of the things Al said, but just to take off from that and discuss a concept that we've been thinking about as a way to provide quick effective results to this program which we think is critical for the Commission and the State of California.

The concept is that the CEC establish a strategic alliance with leading California energy and research bodies to support its mission of meeting the California goals of a robust economy with a reliable competitive energy supply consistent with environmental quality.

The purpose of this alliance in a broad sense would be to plan, conduct and transfer results of a public interest RD&D program addressing the highest priority science and technology needs as defined by the CEC, its Commissioners and its Staff.

As a working title we might suggest something like the California Center for Energy, Economy and the Environment directed by the California Energy Commission. It would integrate leading California research and energy institutions to provide specific state-specific knowledge and tools to address the most relevant energy environmental issues.

We talk about a center. One might call it in modern parlance a virtual center in that we're not thinking about the building buildings or establishing new institutions, but rather to use the concept of a network of integrated resources that exist within the state that could also call upon resources from outside the state, in fact, international resources, to bear on these critical problems for the State of California.

It would be able to very rapidly, since it would use many existing facilities of various kinds, both administrative and research capabilities, very rapidly address the questions at hand, and, I think, bring a rapid response to these key issues of a very high quality.

One of its major features would be that it would be highly interactive with the Commission itself and with the Commission Staff to determine that it was, in fact, addressing problems of highest importance. It would be flexible and able to shift resources, augment resources and move things around as needs

change and as new results dictate the new projects.

So that's in brief the concept, and I'd be happy to answer any questions, comments, if there are; and if not, I'll thank you very much for your time.

PRESIDING COMMISSIONER ROHY: Any comments on these two speakers?

COMMISSIONER SHARPLESS: I have a question, recognizing the time limits. Thank you.

It's an interesting concept, and perhaps if you have something written, I don't know that you do, but it would be helpful to read the detail.

I guess the question is how would it be different than what the Energy Commission is attempting to do?

DR. SUSSMAN: It would be, I think, quite helpful in implementing that by providing a framework of state institutions that would be prepared and dedicated for this function.

We see it that EPRI, of course, could play a role in that given our experience and ability to comprehensively address a broad range of issues. But by no means would our role be predominant or exclusive. We do have the experience of networking institutions and being able to conduct very rapidly carry out these kinds of programs, and we think such a body would be of great help to the Commission, working with the Commission to accomplish its objectives.

COMMISSIONER SHARPLESS: I guess then the question would be how would it relate to other competitors for this money?

DR. SUSSMAN: Well, I haven't really thought about the

details of the implementation. And we could discuss that at the appropriate time. I just want --

COMMISSIONER SHARPLESS: But it would be a competitor? I meant this wouldn't be like taking the CEC's mission and objectives and then funneling the money through this CC EEEE organization who then would be the group that would provide the funding for other interested parties.

MR. PAK: That's right.

DR. SUSSMAN: Certainly not the entire program. I think the program should remain, as Al said, within the CEC. I think this center could carry out a portion of that work if appropriate.

PRESIDING COMMISSIONER ROHY: Remember, Stan, there's 70 people behind you.

DR. SUSSMAN: I know.

MR. PAK: As long as they're behind us.

I think as we've scoped out the work that might be done within the center and looking at the institutions that might be involved, this turns out to be a relatively, would be a relatively small part of the annual expenditures associated with the program. It is not intended to be the director of the R&D program.

I think at most we have estimated somewhere about \$5 million to run the program annually. That would, as Stan has indicated, be dependent on the nature of the issues charged to the center. And then depending on what sorts of resources need to be brought to bear to resolve those issues.

COMMISSIONER SHARPLESS: So it's a way to bring, what, public research institutions together in a collaborative and focus

the research more, use the resources better?

DR. SUSSMAN: That's correct.

COMMISSIONER SHARPLESS: Perhaps in our wildest imaginings cut down on administrative overhead costs?

MR. PAK: Yes.

COMMISSIONER SHARPLESS: Oh, good, we have that on record.

MR. PAK: Not just public, I should point out it's not just public research institutes. We're looking at a private/public partnership. There are a number of institutions such as ours that are private that would like to participate in this.

PRESIDING COMMISSIONER ROHY: I think I heard the word "leverage" behind that somewhere, too.

DR. SUSSMAN: Right.

COMMISSIONER SHARPLESS: You do have a written proposal then that we could look at? And is this one of the operational details that you were talking about in your second issue?

MR. PAK: I'm not sure that we would call it a proposal. We have a concept that we have in writing, an internal draft that we've been working on, and we can provide that to the Commission.

PRESIDING COMMISSIONER ROHY: Just for the record, we do not accept proposals at this time. Background information is acceptable.

DR. SUSSMAN: We do not have a proposal.

MR. PAK: We have background material to provide.

MR. TANTON: But it would be for the operational plan, right?

MR. PAK: It would help you flush out the details related to block awards which will be addressed in the operational plan, yes.

COMMISSIONER SHARPLESS: Right. Thank you.

PRESIDING COMMISSIONER ROHY: Thank you both very much. Oh, I'm sorry, Mr. Tanton has a question.

MR. TANTON: Stan, I have a couple of real quick questions. You describe the network as being applicable to the environmental area. Is it exclusive to that, or could the approach be used in some of the other focus areas or strategic or whatever?

DR. SUSSMAN: Certainly. I think what it does is it provides a strategic sort of comprehensive overview to all kinds of areas that would be of interest. Any of the areas that Mike mentioned, for example, in the summary.

MR. TANTON: Okay. And, second, I'm going to draw a quick analogy to make sure I understand how this network might operate to do this kind of research. I assume you're familiar with the group called Global Business Network who sort of network different business entities together depending upon the particular need at a particular time. Is that the kind of thing that you're, I mean is that a model that we might use to sort of put some boundaries on this idea?

DR. SUSSMAN: I'm not familiar in great detail, so I'm going to be a little cautious. I think it does allow one to build on existing relationships of network within the State of California to get the maximum value using existing products using existing people and capabilities to bring to bear quickly and

efficiently resources to solve problems.

MR. TANTON: Thank you.

PRESIDING COMMISSIONER ROHY: Thank you both.

And unless there are more grandchildren out here, I think we'd like to restrict future comments to the strategic plan at this time in the hearing, but I appreciate your input, Stan.

Mr. Edelstein from GRI. Good morning.

MR. EDELSTEIN: Good morning. Good morning, Commissioners and Staff and colleagues. GRI appreciates the opportunity to speak this morning.

I'll restrict my comments to the strategic plan itself. We do have some implementation comments that we can get into later, and we have filed formal comments on the docket.

We also appreciate being a member of the working group. Mike worked us hard and long, but I think the overall results are good and reflect a consensus view GRI supported of the strategic plan for California public interest energy RD&D. We have some specific comments on a few of the sections, and I'll deal with them.

First of all, we agree with EPRI that an advisory body structure is critical, and it should involve all stakeholders. I think this is probably consistent with what Mike has in mind for advisory structure, but we need to deal with that in a little bit more detail maybe in the operational phase. But gas and electric industry is part of that, other R&D organizations, public interest groups, environmental groups, it's very critical that the stakeholders, and then the potential manufacturers in terms of commercializing the results at least at some level be represented

on the advisory group without building in conflict of interest problems in that particular structure.

We feel that in terms of the four focus areas we think that environmentally preferred advanced generation was one of the most hotly debated topics at the session. We believe that revolutionary approaches to power generation, like advanced gas turbines and fuel cells, are very important under a public interest umbrella. And despite the fact that there is private industry efforts in, for instance, gas turbines, we feel that the very high risk stuff, the revolutionary improvements and the advanced cycles, really won't be done without some public monies to cover that particular area. So we're very supportive of that.

In terms of end use efficiency, we're supportive of RD&D in this area. We believe that a careful balance between the conservation related activities and the efficiency or performance related activities is very important here.

And we feel that on the efficiency side, on the performance side, not only the efficiency of the end use equipment itself, but the efficiency of the entire system be taken into account. We think that's very very important. Whether it's a house, a whole house or a whole building or a whole factory, that the entire system be viewed in terms of efficiency. Not just the piece of end use equipment itself.

With renewables R&D, we support that area. We're obviously interested in hybrid systems. For instance, natural gas renewables technology that can be a bridge to a renewables future. We believe natural gas is one of those bridge fuels that can get

us there.

In terms of environmental R&D, we believe that the entire spectrum of air, land and water quality, as well as safety related issues, should be addressed there. We believe that a full fuel cycle approach to environmental benefits and missions be considered and used as part of that activity.

We also support obviously the block grant concept that EPRI was talking about that is part of the proposals here. There's no reason that the block grant activities can't be competitively solicited like other activities are competitively solicited. We think it can use some of the existing structures in place by public and private interest R&D organizations and cut down on some of the administrative burden as Commissioner Sharpless talked about of having to create new structures to deal with things that are already being dealt with.

And, finally, delivering results to the marketplace is a critical part of this. And some small scaled demonstration in commercialization efforts ought to be a piece of this activity. Because, after all, if the results don't get to the marketplace, they're not going to provide benefits to anyone. And so certainly not public interest benefits. So it's critical that results be delivered to the marketplace.

We also believe that it's critical in the time frame that the legislature has given the California Energy Commission to deal with this initially that some short-term projects be conducted so results can be brought to the marketplace in the time frame of the activities here and not just long-term research be funded. It's

important to produce a stream of public interest-type benefits.

That concludes my comments on the strategic plan itself.

PRESIDING COMMISSIONER ROHY: Very concise. I missed a point on your advanced, your, excuse me, advisory boards when you started that. You had a lot of people included in there.

MR. EDELSTEIN: Okay. The advisory structures should certainly include the gas and electric industries represented in California, R&D institutions, it needs to include all stakeholders, possibly including some representatives of the manufacturing or other commercialization entities that might be bringing products to the marketplace, and, of course, environmental groups, public interest groups and others.

PRESIDING COMMISSIONER ROHY: About 70 people.

MR. EDELSTEIN: No, hopefully less than 70. I think, we found at GRI that groups, that advisory groups on the order of about 20 to 25 are workable. Any more than that and it's very very difficult to get input in, you know, one-day time frame, let's say, where people might be able to sacrifice one day. Seventy would, as we've seen, very difficult to work with. I would say much less than that.

PRESIDING COMMISSIONER ROHY: Thank you.

MR. ABELSON: Commissioner, just one clarifying question, if I may, of the witness.

When you talk about that broad of spectrum and that sort of number of 25, are you thinking more in terms of technical advisory groups for that scope?

MR. EDELSTEIN: That's a good question, Dave. I think

there are two levels of groups talked about. One is this policy level group, and the other is the technical group. I think on the technical group certainly we talked about breaking down into ad hoc technical subcommittees, and there you can get specific technical expertise.

But I was thinking more in terms of the policy level group that it's important to, you don't have to include everybody from every sector, but it's important to have representatives at least at a certain level.

Our advisory council, and I believe EPRI has one also, kind of serves as our conscience. And it's important to have policy level people on that that can help you deal with things like selection criteria, what is and what isn't a public benefit, and you need a group that cuts across the spectrum there that can help on that stuff, so.

PRESIDING COMMISSIONER ROHY: Commissioner Sharpless.

COMMISSIONER SHARPLESS: If I may, I'd like to go to your last point of results being delivered to the marketplace. I know that's a sensitive subject so I'd like to just get a better feel for what you mean by it.

Could you just give me an example of something that you would see being funded that would, what that would be, how we would go about taking the RD&D in assuring delivery to the marketplace through public funding.

MR. EDELSTEIN: Okay. I can give you a couple of examples.

One is venting guidelines for mid-efficiency furnaces. This

is on the gas side, but we've done a lot of research in that area. It was important that the instructions for installing mid-efficiency furnaces actually be sent out to the installers and released so that the practices would be put into place. There's safety issues involved, there are indoor air quality issues involved, there's equipment efficiency issues involved. So getting an entity in place, a partnership with an entity that could release the results, whether it's an R&D organization or working with the codes body or something, it's very very important.

On the hardware side it's forming strategic partnerships with manufacturers or commercializers. After a certain point in time I think this leveraging that Commissioner Rohy talked about is very critical. And GRI has mandatory co-funding requirements for instance. Beyond product development initiation we require 20 percent co-funding, and we get into what I think you call the demonstration phase. We need 40 percent of total dollars from the manufacturers.

So it's building a business plan in early. The public interest entity doesn't need to fund fifty unit demonstration projects, hundred unit demonstration projects. That ought to be left to the private sector. But doing enough to prove the technology and prove technical and commercial feasibility five or ten units out there and to ensure that whether it's licensing or other arrangements were in place that the commercial entity can carry it forward are very very important.

It's this gray area between the last field test and the full

scale manufacturing that a lot of R&D tends to fall over, and it's important that we carry through. A report on the shelf isn't going to do anybody any good. Not the public sector, not the private sector.

COMMISSIONER SHARPLESS: Do you have any words of wisdom, or have you even thought about how some of the things that you're talking about are market transformation issues, which we've been talking quite a bit about in the energy efficiency area.

MR. EDELSTEIN: Yes.

COMMISSIONER SHARPLESS: There's \$232 million for the next four years in that arena. Have you given any thought, can you conceptualize how those two things might bridge together?

MR. EDELSTEIN: Yes. I think on the R&D side and the RD&D strategic plan the issues there you certainly can carry the project to, and ought to carry the project, to technical feasibility and being at least assured that when it becomes commercial that it will, in fact, meet the performance and the cost requirements that will be necessary to take it to the marketplace.

I think first cost buydowns, for instance, which are an important part of possibly the second entity you talked about that has the, you know, hundreds of millions you mentioned, first cost buydowns can help you bridge the gap from producing one or two units a year to 50 or 100 or 1,000 or 10,000 units a year. So I think that would be one of the clear distinctions.

First cost buydowns probably shouldn't be part of an RD&D program but could, in fact, be part of a program to promulgate the

technologies like renewables, for instance, to enable people to buy them out there at a competitive price on the marketplace, and it might need some subsidies to get them there. But that wouldn't be an appropriate part for RD&D for instance.

COMMISSIONER SHARPLESS: Could you see an advisory group maybe that would be connected to both the Energy Efficiency Board and the RD&D stuff sort of working in tandem somehow linking the two groups together?

MR. EDELSTEIN: I think it's critical that they be linked together, but I wouldn't necessarily see an advisory board that crosses both --

COMMISSIONER SHARPLESS: Advisory committee.

MR. EDELSTEIN: Oh, an advisory committee. I think probably if on this upper level policy committee there were representatives for the RD&D group, if there were representatives of the environmental and the energy efficiency and the low income customer, it's important that we tie these things together, and the end use efficiency group, that we tie the two of them together very very closely to avoid duplication of effort and to make sure there's a handoff. So maybe early on it's important.

But I don't know that that couldn't be done at the policy level, and then the policy level committees, and I think a quid pro quo is important that Mike and others be represented on the other groups as well on their policy level groups would help a lot.

And then at the lower technical levels that the coordination could occur so in fact there's a buyoff on the technologies

beforehand, and the understanding that if it's proven technically the renewable side, for instance, would be willing to take the products the next step of the way, whether it's first cost buydown or whatever, so there isn't a, you don't have to throw the product over the wall, if you will.

COMMISSIONER SHARPLESS: Thank you.

PRESIDING COMMISSIONER ROHY: Thank you, Ron.
Appreciate your testimony today.

MR. EDELSTEIN: Thank you, Commissioner.

PRESIDING COMMISSIONER ROHY: Our next witness is Neil,
is it Raskin?

MR. RASKIN: I'd like to thank you for your time this morning, not only to represent CeraFilter Systems, I also represent our parent company which is Foster Wheeler Corporation. We're a worldwide supplier of power boilers. We came into this a little late. We were in attendance at the last meeting, and we are pretty much in agreement with the entire strategy that's placed before us on this.

One of the items that was discussed at the last meeting that we thought was resolved, but when we saw the new write up was this definition of the fuels that are being used. We thought the word "clean" was taken out and just left as generic fuels. And in the new write up the word "clean" has been put back in.

As you can see by that viewgraph there is an abundance of fuels that are fired in California here to produce power, and a large quantity of that is what you would consider not a clean fuel, which is oil, and there is some coal firing here.

There is a lot of RD&D going on with those different types of fuels as dirty fuels that I think would be both efficiency helpful in California, either doing retrofit on existing units or repowering, that we would like to have that definition of clean fuels to include not only just natural gas and renewables, but, also, oil and coal as possible fuels that could be worked on to improve the efficiency of units here and also new processes.

PRESIDING COMMISSIONER ROHY: Excuse me. Please, go ahead.

COMMISSIONER SHARPLESS: I was just going to ask Staff to sort of clarify that issue for us so we know sort of the reasonings.

MR. DeANGELIS: Well, I think that we did receive some comments during the -- after, they were comments after the final workshop on March 24. And we went and we checked with, I think, three different notes that were taken during the meeting, and all three confirmed, at least with those notes, that the term "clean" was not removed at the meeting. At least that's what we thought. So that's why we left the term "clean fuels" in there.

I believe our memory tells us that some of the parties who did participate in the workshops were really clear about this being clean fuels. Now that report did not define what is clean. That is true. I don't think there's a lot of detail on that.

An earlier draft of the report did not have in quotes "clean fuels," but had, I believe natural gas fuels. So the earlier draft, I think, had limited it to natural gas fuels. And that was changed at a later workshop, and I can't recall which ones, to the

term "clean fuels."

I think it's an interesting comment, and perhaps others who are in the advisory group may want to comment on it as they come up also.

PRESIDING COMMISSIONER ROHY: Mr. Abelson, I believe, had a comment on this.

MR. ABELSON: Well, I did, Commissioner, and thank you; but it was simply to state what Mike has just said.

There was a change. It was natural gas at one time. There was discussion about that, and there was some discomfort with that being perhaps too narrow so the word "clean fuels" was put in. And I believe Mike is right in saying that is not defined specifically in the report.

MR. TANTON: Is it the view of Staff or other members that "clean" means coming out rather than going in? I mean if the fuel comes out clean, it kind of doesn't matter what form it takes going in? Is that sort of why that change was made?

MR. DeANGELIS: Well, I think would Staff, again this is not an area that we've done analysis on this at this point in time, I think Staff would probably take a systems view on it. Not just what comes out, but the whole fuel cycle I think.

MR. TANTON: The whole fuel cycle, okay.

MR. DeANGELIS: Yes, I think we probably would.

PRESIDING COMMISSIONER ROHY: Do you have further comments on that?

COMMISSIONER SHARPLESS: Could I ask then just is there a definition, even though it's not defined in report, is there a

definition somewhere rolling around for clean fuels? And if so, would it be applied in this context, or is it applied in a context where you wouldn't apply it in this context?

In other words, clean fuels has to be defined sort of on a case-by-case basis as to what you're talking about.

MR. DeANGELIS: Well, I can't think of a definition right now that I would apply. I'm sure there are a lot of definitions out there. We'd probably want to review that.

COMMISSIONER SHARPLESS: Because I know in statute this has been kind of a sensitive subject, and I recall that there has been legislation where the word "clean fuel" has been used, and I can't remember how the debate has ended. Whether or not in the context of that petroleum fuels were included because it turned out that they were reformulated gas, for instance.

Now that seems to be dealing mainly with transportation issues, and you would not necessarily apply a definition of clean fuel in this arena if it was specific to transportation. So I'm just trying to tease out where we are on this issue and how this might be applied.

MR. DeANGELIS: And quite honestly I don't think we are very far. We haven't looked at what those definitions are and tried to compare them.

And I think we probably do have a couple options here. We could try to define it more clearly, perhaps potentially even in the Commission strategic level plan, that is an option. Another way we could go about this is to define it in the solicitations and perhaps score and rank projects based upon the type of fuel

that is being proposed.

COMMISSIONER SHARPLESS: Was there a strong feeling in the debate to exclude petroleum products and coal?

MR. DeANGELIS: I believe, and again I can't speak for the parties out there, and that's why I would like them to comment on it later on, I believe that there are some parties who clearly would oppose the inclusion of coal and petroleum as a clean fuel. That's my belief, but I would like to hear from them up here perhaps later on in the comments.

PRESIDING COMMISSIONER ROHY: As we go through the comments, right.

My concern here, also, on this is some people construe bio fuel as not clean, which would eliminate a whole area of renewables by putting that in there, and without a definition of "clean" I think we have some problems.

Let me try something out that people can comment on as a possibility of eliminating using clean fuels, those three words entirely, and relying on the logic of the mission statement which says "environmentally sound, safe, reliable and affordable" which you folks really put into your mission statement to start with.

I mean it's got to be environmentally sound or we don't do it. And then rely on the RFPs or whatever to define what environmentally sound could be or have people, in fact, convince us that it's environmentally sound. That's a triable one.

MR. ABELSON: Commissioner, the only other thing I would add just for your clarification is again given the history of the evolution of the four areas from three areas at one time, we

always had an area on renewables. That's never been an issue, frankly, of any dispute in the group that I'm aware of. The core question was whether or not any research would go into nonrenewable technologies.

And one of the commentators earlier today strongly suggested that's not only appropriate but highly desirable. And there was some considerable give and take in the group about that. But ultimately the compromise language that was designed to address that debate is the one that you have however imperfectly before you at the moment.

I am quite confident that in using the word "clean fuels" no one in the group specifically discussed any statutory definitions, Commissioner Sharpless, but I don't think that that forecloses this Commission as it tries to adopt its own strategic plan, in effect hearing this witness and other witnesses, and then, in effect, making its own more expansive definition of what's appropriate in that area.

PRESIDING COMMISSIONER ROHY: Thank you.

Tom, did you have a question?

MR. TANTON: I just had a quick question for Mr. Raskin. Mike indicated that it was his perception that the term "clean" sort of referred to the entirety of the fuel cycle rather than maybe one aspect of it. If the Committee chose to use a fuel cycle definition of the word "clean," would that resolve your particular concern that you're bringing today?

MR. RASKIN: Yes, it would. I mean we're essentially looking at using advanced cycles and RD&D and that to use either

coal or oil or other type fuels that would come out with a clean end product or clean fuel at the end.

MR. TANTON: And clean each and every step along the way.

MR. RASKIN: Yes.

MR. TANTON: Okay.

PRESIDING COMMISSIONER ROHY: Thank you for your comments, and I'm sure we'll hear from others as we go through.

Mr. Spasaro from the California Utility Research Council. Frank, have you changed organizations?

MR. SPASARO: I don't know where I'm at anymore. Mergers and everything else.

Good morning.

PRESIDING COMMISSIONER ROHY: Good morning.

MR. SPASARO: My name is Frank Spasaro. I'm actually employed at Southern California Gas Company still as the Director of Industrial Markets and Technology Development, but this year I also have the dubious honor of being the Chairman of the California Utility Research Council. And I'm here in that role today actually representing the utility members of PG&E, San Diego Gas, SoCal Edison and Southern California Gas.

MR. TANTON: Did San Diego sell off their electric side? I just heard you refer to them as San Diego Gas.

MR. SPASARO: San Diego Gas and Electric, I'm sorry. I was being brief, but thanks for noting that.

MR. TANTON: Okay.

MR. SPASARO: First of all, like, I think, all the other members of the Advisory Committee, we're supportive of the plan

and the report, but while there were certainly a lot of consensus items in the report, there were also a number of controversial ones. And I'd like to offer a couple of recommendations on clarification and some enhancements to what's in the strategic plan.

First, is an overview that the comments relate to leveraging the existing utility expertise that we have, adding a fifth focus area called system reliability, consolidating oversight of public interest RD&D between Energy Commission and the California Public Utilities Commission and the further development of the operation plans.

Regarding the leveraging of utility expertise, certainly the utilities have had an excellent track record of conducting public interest RD&D for many years. With the rate cap provisions of AB 1890 what I certainly believe are controversial funding guidelines within AB 1890 and along with the guidelines in the February 5 PUC decision, I think that's created a situation that could result in a loss of that expertise.

The CURC utility members believe that regulated RD&D under these conditions is unlikely to be pursued as a consequence. And while that conclusion is certainly somewhat controversial, I don't think that was anybody's intent when they were drafting up AB 1890 for that situation to occur.

The February 5 decision, of course, also offered up several options on how the electric utilities could pursue that issue, and one of them was coming to the Energy Commission and negotiating something to conduct public interest RD&D.

To facilitate that process, CURC would encourage the Energy Commission to consider a pre-allocation approach for funding certain utility RD&D projects and programs which meet the definition of public interest RD&D.

And we certainly think there is a way to do this whereby the utilities would still be subjected to the same selection criteria, reporting requirements on public interest RD&D with oversight from the Energy Commission.

Regarding the new focus area, the fifth one, being system reliability, and that that needs to be added to the report. In the February 5 PUC report they recognized that California has a vital interest under the electric industry restructuring not only to ensure uninterrupted power supply in California but to maintain the integrity of a truly integrated T&D system.

In their decision the CPU stated the system reliability, including transmission RD&D, T&D RD&D, should be considered as potential candidates for public interest RD&D. And CURC would like to see that this is more fully recognized in the report than it is right now. There's some references to reliability, but it's not specifically mentioned as system reliability.

Regarding the issue of the public interest RD&D in oversight issue, there was approximately \$700,000 identified in the February 5 decision that both the Utilities Commission and the Energy Commission would have oversight for. At \$700,000 I just don't think that it's in anybody's best interests and efficient to maintain that, so we're recommending that that money be transferred over to the Energy Commission and that one body manage

it.

This would probably require that there be some petition to modify either filed by the Energy Commission, CURC, the utilities or some combination thereof, but we think that that would help move this thing forward.

And then finally in the --

MR. TANTON: I'm sorry, a petition to modify the PUC decision?

MR. SPASARO: Yes. The February 5 guidelines on funding, yes.

MR. TANTON: Right, thank you.

MR. SPASARO: And then finally on the development of operation plans, we think that all interested stakeholders should be a party to that, not just a limited group from the Energy Resource California. We know that that will slow things down probably, but it probably is in the best interests of getting all the stakeholders involved, and it would minimize any other problems that might come up. Alleviate any start up issues, etcetera.

I have an expansion of my comments in writing. David Berokoff, who works for The Gas Company, just arrived on his plane, though, so we didn't get the information in the back. We'll have it probably after lunch so there will be a document that goes with this.

It's obvious that there are a number of stakeholders and special interests that are vying for all this public interest money. What I'm offering up, what CURC is offering up here, are

recommendations that we think can be made acceptable as an acceptable compromise to moving forward with a viable public interest program in California.

I certainly look forward to working with the Commission both in my role as SoCal Gas and as the CURC chairman this year to furthering the operations plan and also the issue that we've identified before about what the future role of the CURC may be. We haven't gotten into any details still on that one. We're trying to convene CURC to try to come up with a proposal on how we might become some sort of an advisory council for example, but that has yet to be done, so.

Thank you.

PRESIDING COMMISSIONER ROHY: Thank you, Frank. Are you then suggesting to start immediately on workshops for the operations plan? Is that your suggestion number four on bringing the stakeholders into it?

MR. SPASARO: I believe that would be the consequence of trying to get everybody together, yes.

PRESIDING COMMISSIONER ROHY: Okay.

COMMISSIONER SHARPLESS: I'd like to ask a question, yes. It's interesting how you have juxtaposed the reliability issue to the leveraging of the utility expertise, and I'd kind of like to explore how reliability fits with the expertise that you think might be lost by the utilities. Could you address that issue for me?

MR. SPASARO: Well, I think the conclusion basically is because when you look at the funding caps and you look at the

\$700,000 and what the electric utilities would then have to do to file for a regulated program, that probably won't happen. I don't think right now, anyway, that they can, that they're going to be able to do that. I mean and I think you need to ask each of them what their positions are on this, but that's the general conclusion.

And, again, I know that's controversial, but that's basically where we're at right now. And I think that that's a risk what's going to happen with those existing utility programs.

COMMISSIONER SHARPLESS: But aren't you basically asking this Commission to somehow consider funding with public money activities that are really activities that should fall within the regulated funded RD&D?

MR. SPASARO: No, no. I think what I'm saying is that it's been identified that system reliability T&D is public interest, and that there is a lot of that kind of research now being done within the electric utility R&D programs. And all I'm suggesting is that there's a way to design a pre-allocation approach to cover off on all of that and not lose it.

And it's not clearly identified in the strategic plan right now that that kind of research is going to be done. There's inferences that it will be done, but it's not specific in there. There was a controversial issue during the last series of committees.

COMMISSIONER SHARPLESS: How did the CPUC make its decision that \$700,000 was going to be adequate to fund publicly funded T&D research?

MR. SPASARO: I really don't know. I think you're going to have to probably ask somebody at the Commission.

I think that that was a controversial conclusion, actually. I think, and I've heard all kinds of reasons, but I don't know specifically the answer.

COMMISSIONER SHARPLESS: So your position would be that there's a lot of unfunded publicly funded T&D that is currently being done by the utilities that won't be done if, in fact, there's only \$700,000 to do it.

And you also feel that based on the way the language is drafted in the strategic plan that publicly funded T&D, because it's currently in the administrative purview of CPUC, wouldn't be done by the CEC because of the way that the administration has been split up; is that your position?

MR. SPASARO: I think that's a possibility. And what I'm offering to avoid that is this approach. And this was inferred by the February 5th decision by the Utilities Commission.

COMMISSIONER SHARPLESS: Can you give me some examples of T&D publicly funded R&D that will be lost?

MR. SPASARO: I can't personally. You'll have to ask the electric utilities to give you specific. I do not have specifics, Commissioner.

COMMISSIONER SHARPLESS: Can you give me an example of what you would intend to have funded at the CEC if, in fact, language was inserted that made it more clear that T&D publicly funded research could be done here?

MR. SPASARO: I'm not sure I can give you specific

examples.

All I'm offering here is that there are existing, I think that can be defined as public interest T&D, existing programs that, they're being conducted by the electric utilities today, that fall under the definition when you include system reliability in public interest as inferred by the Utilities Commission February 5th decision and some of the language in AB 1890, that would fall into that category. And this would address the issue that was raised in the February 5th decision about the electric utilities going to the Energy Commission to have the ability to conduct some of the public interest RD&D.

COMMISSIONER SHARPLESS: Is the position then of the utilities that none of the T&D that lacks funding is regulated funded T&D?

In other words, what I'm asking is how do we separate out what is regulated and what is public? There's obviously an option here that the utilities could go to the CPUC and ask for some of this T&D funding through their regulated rate making process. They're saying that it's not regulated, that it's actually publicly funded. Without examples I have no way of determining where we are on that issue.

PRESIDING COMMISSIONER ROHY: May I interject into this argument.

COMMISSIONER SHARPLESS: Sure.

PRESIDING COMMISSIONER ROHY: I'm just looking through Judge Gottstein's [phonetic] February 5th decision here, and I believe it's a draft copy I have so this may not be the final

wording, but the sentence says, "Due to the relatively close range of the parties' estimates and their apparent willingness to agree to funding levels within that range, we believe that it is reasonable to adopt the utilities' 1996 estimate of \$700,000 for annual T&D related public interest R&D expenditures."

So apparently, and I don't have any facts to back this up, but reading this it says that the utilities made an estimate that T&D public interest is \$700,000; is that correct?

MR. SPASARO: I understood and I think that language is still in the final. But my understanding was that that was a misunderstanding of what the utilities were presenting as system reliability public interest RD&D.

PRESIDING COMMISSIONER ROHY: Oh, I believe there's a difference perhaps between reliability and T&D R&D. But this specifically doesn't say reliability; it says T&D.

MR. SPASARO: Then I would think that the number would even be bigger. So that was my understanding.

PRESIDING COMMISSIONER ROHY: Then they go on to break out how each utility gets to spend it.

MR. TANTON: It would be bigger for systems reliability than for T&D? Is that what I heard that remark?

MR. SPASARO: I think the other way around, wouldn't it?

MR. TANTON: Systems reliability including things beyond T&D would be larger?

MR. SPASARO: Probably could go either way then when you word it that way.

PRESIDING COMMISSIONER ROHY: Any other questions?

COMMISSIONER SHARPLESS: I would only say that I think that this is certainly an important issue, and I, for one, do not have enough facts.

MR. SPASARO: I agree. I think more facts need to be pulled together. I think the criteria needs to be established. I just think this is a mechanism to move this issue forward by taking this approach. And, again, I recognize that it's controversial. I know that --

COMMISSIONER SHARPLESS: I'm very sensitive to the fact that I don't want to put something in the report that sends the wrong signal to folks saying that you weren't able to sell it at the CPUC because, in fact, it is regulated funded T&D that you're now putting a reliability label on so come over to the CEC and you'll have a better chance at it. No. If it is regulated T&D, it should be funded as regulated T&D and not under publicly funded RD&D at the Energy Commission.

And I just think that that ought to be very very clear as one Commissioner.

MR. SPASARO: I agree. I agree.

COMMISSIONER SHARPLESS: So you know, to me the issue is becoming offuscated by terminology that rings certain bells with certain people, and I personally don't like that. That doesn't clear up the picture for me.

MR. SPASARO: I agree with everything you said. I understand that. And this is certainly, as I point out, a controversial position, but I think there is a way to craft it that will meet most everybody's needs in a compromise position to

move this thing forward. I really think there is an amount that is public interest under the system reliability. If it's regulated, it should be regulated.

The difficulty we have here is that from the very original report in the groups that we put together there is no bright line definition on this. There's a lot of overlap. And that conclusion in and of itself does not help this issue. But if it is regulated and, I mean, that might be one of the criteria that we come up with.

The Commission in that report, though, said that if there were public interest items that the utilities could go to the Energy Commission and negotiate. That was one of the options. They could also go back to the Utilities Commission and ask for more funding within the rate cap. You know there are a number of issues here to try and resolve. It's not an easy issue.

PRESIDING COMMISSIONER ROHY: Do you have suggested language in your written comments?

MR. SPASARO: There are some. It's not all of it. Not all the details and the criteria, but it's a starting place for that.

PRESIDING COMMISSIONER ROHY: Commissioner Laurie, I believe you had a question.

COMMISSIONER LAURIE: Thank you, Commissioner Rohy.

I have not been a participant in the discussions up to this point, and as we move out of Committee to the Commission as a whole I'll be doing my best to educate myself with the assistance of others I am sure, but I am certainly aware of the issue being discussed, however, and I have heard the phrase "reliability will

be at risk." And I need to understand that phrase.

None of us want reliability to be at risk, but I need to know whether, in fact, that is a statement that some are uttering; and if so, I need the support for that statement and the basis for that statement. So as we go on, that is an issue and a question that I certainly will be focusing on.

When you said, and I thought I heard you say "reliability will be at risk," first of all let me clarify did you make that statement?

MR. SPASARO: I may have, but I don't recall exactly where I was saying it.

MR. TANTON: I think his statement was that reliability R&D would be at risk.

MR. SPASARO: Yeah, I was talking about the RD&D activities related to system reliability.

MR. TANTON: Rather than reliability of the system per se.

MR. SPASARO: Correct.

MR. TANTON: Okay.

COMMISSIONER LAURIE: Okay. Thank you. That helps one. But, two, reliability will be at risk if what happens? I need the end of the sentence.

MR. SPASARO: Right.

COMMISSIONER LAURIE: Reliability will be at, and I'm not putting you, I'm not attempting to put you on the spot, I'm trying to educate myself.

Reliability will be at risk if what happens? Under what scenario?

MR. SPASARO: I'm probably not the best person to be asking that question to, truthfully. I'm representing a position on RD&D system reliability. I have no electric utility experience per se. I'm a gas utility person.

COMMISSIONER LAURIE: Thank you, and I appreciate that response.

But if there are others who are taking the view that reliability will be at risk, then I, for one, need to know the sentence that comes before that and the sentence that comes after that.

Thank you, Commissioner Rohy.

MR. TANTON: I'm getting a little confused, I guess, as some of the other questions may help move us down the road. I guess I'm concerned with the use and application of the focus areas and I'll use an example to illustrate my difficulty here.

Suppose there was some R&D being done on a technology. And it really doesn't matter what the technology is. But if that technology happens to provide benefits to the T&D system, but that technology also provides benefits to the environment, and that technology also provides benefits to cost to the ratepayer, etcetera, etcetera.

The fact that that technology may provide benefits to the T&D system or to the grid's reliability, is it your view that the strategic plan would exclude that from public interest R&D unless we include system reliability as a criteria? Or by virtue of the fact that it provides benefits in the other areas it could be included?

MR. SPASARO: I don't think the strategic plan would exclude it, no. And, in fact, I think that sort of also answers that clean fuel question in my mind. Because anything specifically, if it showed enough value in any of those areas, I thought we were developing a process where we could ensure that those things were included. So it would not exclude it, no.

MR. TANTON: Okay. And the extent to which a technology, and because there's no bright line between regulated and competitive and public interest kinds of R&D, is it your position that most kinds of research that would be undertaken include some components of each?

MR. SPASARO: Absolutely.

MR. TANTON: Okay. So we might also encounter the same difficulty if we're looking at the area called renewables. That some R&D undertaken on renewables might appropriately be undertaken by the competitive market just as some might be appropriately be undertaken through the private interest R&D.

MR. SPASARO: Correct. And I could certainly see people taking the position that there is something that should be done as competitive, but nobody's doing it. But if it has enough public interest benefit, it could be done by the ERC.

MR. TANTON: Thank you.

PRESIDING COMMISSIONER ROHY: Thank you for your comments.

Oh, excuse me. I'm sorry, Staff has a question.

MR. ABELSON: Just one quick question during closing.

In response to Commissioner Laurie's question about the tail

end of the comment, my notes indicate that what Frank was stating was that he believed that it was unlikely that the regulated utilities would be pursuing regulated RD&D for T&D under the options that were available in the PUC decision.

And, of course, how you square that with Section 330 of the Public Utilities Code under AB 1890, Section 330(f), which says that the delivery of electricity over the transmission distribution system is currently and will continue to be regulated to ensure system reliability, among other things, is question I think that you all will have to resolve as you go further on this issue.

PRESIDING COMMISSIONER ROHY: Mike.

MR. DeANGELIS: Yes, just a brief comment.

I think the issue here is not reliability. I think everyone agrees that reliability is important; it's critical; it's part of the mission statement; and I believe in my presentation I even cited an example about where reliability can and should be included in the public interest RD&D program. The fundamental issue I think here is who pays for the reliability RD&D. I think that's the fundamental issue.

The concern I think that has existed is that there has been discussions and proposals I think from our investor owned utilities which imply that all of the reliability RD&D and all regulated RD&D should be funded by the public interest RD&D surcharge, 100 percent of it. And I think that was the issue.

And I think that remains an issue, except that I do want to comment that it was pleasing to hear from Frank, I think in

response to one of the comments from Commissioner Sharpless, that regulated RD&D would be provided here. That there would be regulated RD&D funding. And I would actually like you to expand on that if possible that there would be funding of regulated RD&D.

MR. SPASARO: I don't remember saying that, Mike.

[Laughter]

MR. DeANGELIS: You don't remember saying that? Okay. Well, I thought I heard it in response. That's why I wanted to see if you could expand on that a little bit more.

PRESIDING COMMISSIONER ROHY: In fact my notes agree with --

MR. DeANGELIS: That is the issue. That is the issue is whether there is going to be regulated RD&D funded by the utility.

PRESIDING COMMISSIONER ROHY: My notes agree with what Mr. Abelson said that regulated RD&D is unlikely to be pursued due to the rate cap is what I wrote down.

MR. TANTON: Yeah, but I think Mr. Spasaro's comment, if I recall it correctly, was that if the R&D is regulated, it should be provided by the regulated entities, not by the public interest funds. That's different than whether it will necessarily be pursued.

MR. SPASARO: Right, which is a little different than what Mike thought I said, I think.

PRESIDING COMMISSIONER ROHY: Any other comments for Mr. Spasaro? Well, thank you for bringing -- excuse me, please.

MR. SPASARO: One last comment. It certainly is fun and entertaining being the CURC chairman this year. That's all I

could say. Look forward to turning it over.

[Laughter]

MR. TANTON: You got into the cycle such that it would be primarily electric issues when it was your turn.

MR. SPASARO: Exactly. Very challenging.

Thank you.

PRESIDING COMMISSIONER ROHY: Thank you very much.

Ms. Betsy Krieg representing PG&E.

I didn't order these blue cards in any specific order. It's as they came in, so if there is an implied order here, there is none.

MS. KRIEG: I sort of wish you'd had Edison go before us. But good morning. I'm Betsy Krieg with Pacific Gas and Electric Company.

We have a couple comments we'd like to make on both the strategic plan and also on sort of making sure the program is a success. We have some written comments somewhere out there, and we've, I think, each have a comment. We've docketed the comments.

The process of developing the strategic plan was laborious. I'm personally glad it's over for this point. The Staff and the participants, I think, worked very hard to come to a consensus document, and I think what you're hearing today are comments by individual parties where, although we strove for a consensus document, there were areas where we did not agree. And so, for example, some of the points Frank just made I will carry forward in terms of an investor owned utility's perspective.

The couple points we wanted to make is one that PG&E has been

doing R&D for a long time. We've been doing it with ratepayer funding. We believe a lot of the work we've done has had great public interest benefits.

What we would like to be sure is that as the CEC designs the program and you look at what you want to fund, you look at the focus areas, we'd like to be sure that at least over the next couple years as PG&E transitions out of full ratepayer funding for its electric programs that there's some way to maintain the continuity of some of the projects we've been doing which we believe have some public interest benefits.

And our approach that we're currently thinking of doing is that once PG&E as a corporation decides what it wants to do with its R&D program in a restructured electric industry, we think what we'd probably want to do is come to the CEC under the Energy Research California program and say, here are the projects we have going on at the moment, and here are the ones we think have large public interest benefits. What do you think?

To the extent that we all agree that work on -- I have a blank, so I don't have a good example anyway. To the extent we go through that list, and we all agree that there are a lot of public interest benefits, then we would hope that the CEC could work out an administratively efficient way to let us have some money to do that.

I think you've heard lots of comments earlier in earlier hearings about the CEC's contracting processes, and I'm not going to touch those. I will just say that our company has had unpleasant experiences trying to contract with the CEC. On the

other hand, other people have had unpleasant experiences contracting with us. Two big groups trying to contract is difficult, so I will just say I hope we can work something out.

The other area is the suggestion that Energy Research California program should have an emphasis on system reliability. A focus area may or may not be needed. In the conversations that we had in the working group and in subsequent work that's gone on, it seems clear to us that the idea that system reliability is an important focus of public interest research at some level needs to be raised a little higher than what it is now.

Right now it's mentioned in the strategic energy research area. We'd like to see that emphasized a little bit more.

There are certain things in system reliability that I suspect will continue to be a regulated function, and we will continue to, for some period of time, to ask for money from the PUC to fund that research. But there are a lot of things that we do that don't simply benefit our ratepayers, and, therefore, we are feeling increasingly awkward asking for money to do research that is generally useable throughout the State of California.

An example, which may be not a great one, some of the work we've done on modeling the transmission system and how to make it work most effectively. That is something that will now in the future benefit the ISO.

It's the sort of work that we've been doing for years. We have done it with money collected from PG&E ratepayers because we believe it had good benefits for our ratepayers, but it also benefitted the State of California.

In the future, things along that line might be the kind of project we would come and say, we think this has public interest benefits, yes, it has benefits to our ratepayers, but we think the bulk of the benefits are increasing the state of knowledge about how you do X, Y or Z. So those are the sort of things we'd probably want to discuss.

And to get back to one of the questions asked earlier about shouldn't regulated R&D be funded by regulated rates as apposed to the public interest rates; yeah, if it's truly work that's only going to benefit your regulated utility, I think we would probably agree with that.

We do have some work in our department that would be very hard to generalize from the PG&E system to say the Edison system or the San Diego system, that would be, we'd be highly unlikely to ask somebody outside the utility to fund because it's unique to our service area.

The question of how much of that work we will do in the future is an open question. I think it's unlikely, for example, that PG&E will ask for additional ratepayer funds for R&D by the May 5th deadline the PUC imposed. May 5 hasn't come and gone so I can't say it definitively, but I think it's highly unlikely.

So we are facing a transition in terms of electric R&D. Because PG&E is a combined utility, we have a different issue which is we have some gas R&D money that will be coming in at least through the end of 1998. So we still have that. We have some low emission vehicle money, and we have some un-spent electric dollars that we'll be using over the next year or two to

figure out where we're going. But, basically, there is a cliff as of 01/01/99 in terms, no, 01/01/98, in terms of electric R&D funding.

So that's what I wanted to say about that.

I had one other comment which is the utilities, Edison and SoCal Gas and PG&E have also filed a letter in the docket to Commissioner Rohy suggesting that on the environmental issues you hold a special forum to try to develop a research agenda in that area.

In talking with the environmental researchers at PG&E and SoCal Edison and elsewhere, there's a great concern that environmental research is not well understood, and, therefore, may be neglected as you put together a research program for Energy Research California.

So the suggestion is that as you move forward and how you develop your operational plans and things like that, consider having a special forum and inviting a lot of state agencies and others to come talk about environmental issues in California that might need to be especially addressed as we move into the restructured energy industry. And don't just leave it to those of us who have been on the Advisory Committee or who know people who might want to come because we don't have good expertise in that particular area necessarily.

PRESIDING COMMISSIONER ROHY: Thank you, Ms. Krieg.

Mr. Sussman mentioned a type of working group that might address environmental problems. Have you had that discussion, or is that a new idea today?

MS. KRIEG: I heard his suggestion for the first time today.

PRESIDING COMMISSIONER ROHY: One approach, though, to your last item.

MS. KRIEG: It's an approach.

PRESIDING COMMISSIONER ROHY: Thank you.

MR. TANTON: Betsy, your suggestion for an environmental workshop you indicated was in a document. I assume that's in a different document than Mr. Guardalabene's letter of today?

COMMISSIONER SHARPLESS: It's in an April 17 letter.

MR. TANTON: Not the one with the cover letter by Mr. Guardalabene?

COMMISSIONER SHARPLESS: No, different one.

MR. TANTON: Thank you.

COMMISSIONER SHARPLESS: If I might.

PRESIDING COMMISSIONER ROHY: Please.

COMMISSIONER SHARPLESS: If I might, two questions, Betsy.

The issue of systems reliability, the concern that the way the focus issues or perhaps the mission statement is currently written does not emphasize enough the system reliability concept. I think that's the essence of what you're saying. And that the Energy Commission needs to look at that and see whether or not it does, and if it does, what it currently now means.

To help me through understanding what it means, do you have a definition for "system reliability," what it might mean in terms of RD&D?

MS. KRIEG: I can give you some examples, but I can't think of a concise definition. But keep in mind that part of what's happened is that between the time the PUC constituted advisory group and the CEC advisory group got together and produced first the PUC report and then this strategic plan, the Public Utilities Commission and the legislature has drastically changed the way R&D is funded in the State of California.

PG&E at least went in to the initial discussions believing that there would be a public interest surcharge in addition to the existing level of regulated R&D funding. Because of AB 1890 and the way the PUC has interpreted that, at least on the electric side, that no longer exists for at least PG&E as of 01/01/98. We'll have a million dollars of electric funding for R&D starting 01/01/98. Since we had 31 million, and 30 million is now going to come to you guys.

So we participated in the working groups trying to keep going in that consensus area while the world had changed.

Our comments now are saying the world has changed, it's time for the CEC to recognize that just as PG&E is now recognizing that and trying to cope with what that means. The other thing that is obvious is with the establishment of the ISO and the power exchange some of the R&D we would have done on system reliability to try to keep the transmission system operating effectively we would no longer plan to do in the future because that's now an ISO responsibility.

But for us system reliability includes both keeping the distribution system up and operational and keeping the

transmission towers maintained even if we don't operate them. And in the future the system will stay reliable.

The question is: At what cost and is there a better way? Because that's all R&D has ever done is offered our company better options, better technologies, and said we know you have a system that works. Here's a way, here's a new technology that might be slightly cheaper, might be a little bit better.

But don't misread into at least our comments that PG&E system reliability is going to go down drastically if you don't give us a little bit of R&D dollars that won't happen.

It's the system is good. It will continue to be good. PG&E will continue to maintain it. We just happen to believe that R&D can add value by providing more options and little more intelligence about how to make mind decisions.

COMMISSIONER SHARPLESS: But isn't it true that under some of the examples that you use for system reliability that those, in fact, are regulated funded RD&D activities? Things that deal with the distribution wires that make them more efficient. Things that deal with the towers that improve their safety.

MS. KRIEG: Absolutely. By definition all of the T&D functions are regulated by the PUC. So the distinction we used to draw in this working group and these advisory groups was that there would be regulated work, regulated R&D dollars to support regulated functions. There would be competitive dollars to do competitive market things, and that there would be a separate pool of public interest dollars to do those things that had public interest benefits. Which we meant in that context a private party

couldn't benefit from.

It's EMF research, it's new ways to monitor air quality from power plants and cars. I mean it's things that there's no easy way to make a buck out of, and, therefore, nobody's going to fund it.

That's now begun, I think, to change by definition, and the use of it is beginning to change as people think about the amount of money and what really needs to be done. You've heard quite a few comments earlier, and probably you will today, from people who have new types of generators and things like that that need a little more money to bring it to market. Well, some of us don't necessarily personally believe that that's the best use of public interest dollars.

It's not that there's no benefit to the society. There may be vast benefits to California. The real question that's going to confront you will be: What's the best use of these limited public interest dollars and would anybody else fund it?

But that's changing as, you know, the world's changing and as our needs are changing.

And also, to be clear, it's not clear to PG&E how we're going to proceed in the future so I can't give you a list of here are the projects we'd like you to fund because we haven't figured out exactly what we'll be doing in the future.

COMMISSIONER SHARPLESS: I just will leave that issue alone for awhile.

Could you give me -- your letter on the environment was very interesting to me, and I just wanted what you're saying here is

that you're currently involved in some environmental research issues, and you think that we should sponsor a forum and determine where the priorities for continuing environmental research ought to be.

I was just curious. Obviously air quality is one of those research areas I would think. What other environmental, just broadly environmental, is it fish and water, land use, can you give me an example?

MS. KRIEG: That's exactly the problem we're having. When we talk about it internally at PG&E, we sort of separate it into air, water, natural resource management, but it also covers things like birds flying into the windmills at the Altamont. So it's anything that has to do with the environment. But for PG&E most of our research has been directed to generation related impacts, not water and air quality impacts there.

But that's one of the issues the participants and most of the advisory groups know, I think we have pretty good representation from energy efficiency, some from renewables, some from advanced generation, but just a scattering from environmental. And we all know enough to set the agenda, and the people, the experts we asked said, you know it's really confusing. We better get together and come to consensus.

So that's all this letter is meant to do is say this is one area where we really think some additional input is needed.

COMMISSIONER SHARPLESS: And do you have the names of those people that you would recommend we include?

MS. KRIEG: We talked to a couple people, and there were,

in addition to some of the staff at various utilities, and I don't have their names specifically, suggested the department has some things like the Department of Fish and Game where we've done work with them, the Department of Conservation, State Water Resources Board, the Air Resources Board, those are the folks who know a lot about from a state perspective what they've been looking at.

And I think there are a lot of other environmentalists in the state who could come. But we could certainly put together a list if that would be helpful, but we just thought we ought to start with some suggestions.

COMMISSIONER SHARPLESS: Thank you.

PRESIDING COMMISSIONER ROHY: Betsy, any other programs -- I'm somewhat confused. You recently here in the last few moments said you're not sure what your company is going to do in the next few years, vis-a-vis public interest programs, but then earlier in the testimony you said, as we design our programs we should maintain the continuity of existing R&D programs.

And I guess I'm a bit confused on whether they're existing ones that have continuity or are you referring to, please tell me what you're referring to.

MS. KRIEG: Sorry, I didn't mean to confuse you.

In terms of the long term future of PG&E's R&D effort, we're not sure what that's going to be. Say three to five years out I couldn't tell you today what we might be looking at, even the kinds of things we'd be doing, because we're rethinking that. But between now and the next couple years, we have some projects that are ongoing that we would like some continuity, at least to be

considered, to try to wrap up projects that have been going on for a year or two that have a couple more years to go and then we'd have some good results.

We'd hate to lose some of that work just because our funding is disappearing as of 01/01/98.

PRESIDING COMMISSIONER ROHY: Assuming we take the contracting processes off the table for a moment, would your company be willing to respond to RFPs for this type of work?

MS. KRIEG: Let me say that we have done that in the past.

PRESIDING COMMISSIONER ROHY: Cautious answer.

MR. TANTON: I have one question.

I'm going to draw a little hypothetical, and I'd like your reaction to it. We've heard a lot of discussion this morning about systems reliability and the public benefits therein. Suppose the competitive market in renewables develop some additional renewable technologies that were more cost competitive than they are today, but those new technologies required some sort of gateway or interface with the grid to protect the grid, not to protect that renewable technology. What would be your view on the public benefits of that kind of research? Would that sort of fall in the public interest ballpark?

MS. KRIEG: Sure. I would say that if the assumption is there are multiple renewable technologies and multiple vendors, and someone believes there's a significant market potential, and, therefore, you can expect lots of interconnections, then, yes, if you determine that's not something that the renewable technology vendor can or is able to do, then that certainly might be a good

use of public interest funds to develop the protocols or at least describe the problem in a way that could then be handed off to some vendor to develop the interconnection agreement or the technology.

MR. TANTON: So in the early stages it might be more public interest, and in later stages when somebody starts building hardware that would be called this interface, it would be passed off to competitive market?

MS. KRIEG: In my view it's going to be hard to draw that line between using public funds to do public interest research where there is general benefit but no specific benefit. I think you are always going to be pushed to try to give money to technologies that are somehow going to benefit an individual. And I think that's the balance you'll have to, you're going to have to make that judgment. But the public interest dollars should go to things that are going to generally benefit the public and not enrich individuals or firms.

PRESIDING COMMISSIONER ROHY: Mr. Abelson.

MR. ABELSON: Just one quick legal clarification on Ms. Krieg's comments.

She seemed to suggest, or at least it was my understanding when I was listening to her, that when AB 1890 was passed and the CPUC decision was rendered that somehow fundamental assumptions about regulated RD&D were changed permanently. And she gave the example of PG&E having a \$31 million budget pre AB 1890, and since 30 million was moved into the surcharge that left them with one million dollars.

What she did not highlight in her comments, but I think it's important for this Commission to always be aware of, is that there's nothing in AB 1890 that forecloses PG&E or any of the other utilities from seeking and obtaining additional dollars either from their existing regulated budgets, and the PUC has invited them to take that option, they have chosen not to so far, to seek an augmentation to that regulated budget, the CPUC has invited them to do so, they have chosen not to so far, and within AB 1890 there is a specific provision that the CPUC could enlarge the surcharge, it's total amount, from 62-and-a-half million to some larger amount if it chose to do so. And in the area of public interest T&D if 700,000 is now somehow viewed as inadequate, there is certainly yet that option in addition to the one that the utilities are suggesting.

So I simply want to be clear about what the mechanical choices are. The policy choices, of course, are another matter.

MS. KRIEG: I would hate to argue with a lawyer, but the one thing that David didn't mention is there is a restriction in AB 1890 which is the rate cap. So, and I think we covered those, those three options. I mean those are good descriptions of what the options are. They're just not really available to us at the moment.

PRESIDING COMMISSIONER ROHY: Thank you, Betsy. Appreciate your testimony.

We're going to take a break for lunch. But before we start a minute, the first witness will be Bob Judd. Are you willing to be up right at 1:15. And the second speaker will be Ken Broome. So

at 1:15 that's our scheduled return time, we will recess until 1:15.

[Lunch recess]

PRESIDING COMMISSIONER ROHY: I think we have given the five minutes. Bob Judd, you're next witness.

MR. JUDD: Thank you, Commissioner Rohy, gentlemen. My name is Bob Judd. I'm a spokesman for the California Biomass Energy Alliance, which is the organization of owners and operators of 40 biomass fueled power plants here in California.

Before I offer a few specific and general comments, I must note that the process as well as the product that the Staff team has put together on this is truly exemplary. I've spent most of my time in the past few months working in the renewables group, and I thought I had seen good work when I saw the end product there; but I have to say that the work that this group has developed, in which we are a co-signatory but quite honestly not as much a participant as many of the other members, is certainly equal in quality to that that the renewables group labored through to put out. So we have high compliments for the process and the product so far with this.

I have relatively few comments to offer, and I will try to respect your five-minute time deadline in the same manner that prior speakers did.

[Laughter]

PRESIDING COMMISSIONER ROHY: You have a way with words.

MR. JUDD: See if we could get through this. I have a couple of comments specific to the report itself. One dealing

specifically with the advisory and the review committees that are mentioned in there.

We would emphasize that the range of membership should include all interested parties. And in reading the text of the document we have before us we note, for example, that the document doesn't refer at all to existing renewable energy industry or to electricity generators other than investor owned utilities. I'm sure it's just an oversight, but those of us who are in the non-IOU generating side would like to offer our participation as this goes along.

In terms of the options that are mentioned, I won't belabor these at all but simply say in the document that ultimately goes to the full Commission for approval we encourage that options talking about support of public interest R&D projects that will foster the development of energy technologies also foster the implementation of technologies and also foster process improvements as well as technologies themselves and services which have the potential both to reduce costs or to be cost competitive. As I will demonstrate in a moment, the biomass industry has a number of types of projects in mind that will reduce costs and bring us closer to the market.

I must comment on two items that were brought up earlier. The first, Commissioner Sharpless noted and I would like to emphasize is that there is an interface between the renewables fund and the RD&D fund that needs to be carefully thought through.

The renewables fund and the renewables report that went to the legislature certainly invests heavily in emerging

technologies, which in the eyes of many are equally suitable for R&D funding. There is a line there, and we are not sure that the line is clearly marked.

The effect, I think, in the renewables fund, which in some large measure, was meant to support a transition of existing projects may, in fact, have shortchanged existing technologies in order to over fund emerging technologies. If that's the case, or if there is this sort of gray area between these two, we'd ask the Commission to keep in mind that some of the emerging technologies seeking support under the renewables program may in fact meet the criteria, be more eligible or equally eligible under this, and some clarity has to be brought to that during the process.

Secondly, I would note that the RD&D report we would recommend that it be more explicit in its willingness to support applied as well as basic research and technology development. We won't go so far to say that a certain percentage of the RD&D money should be for applied research, but we think that it should be noted that both deserve recognition and support here.

I would further note that a concept which I had not heard until this morning is one that, if I heard it right, that the biomass industry and the existing renewables industry generally would have significant problems with, and that is a set aside of pre-approved dollars to the investor owned utilities. That seems entirely out of keeping with the intent of these funds.

And not to say that the investor owned utilities may not have ideas that merit funding under public interest R&D, but to create a set aside for them prior to the process of weighing the projects

to occur seems to be entirely inappropriate.

Mr. Tanton earlier spoke to the use of full fuel cycle accounting on that. That seems to be an appropriate idea for further research and discussion within this group.

I would like to close with two comments. One that we need not address at length here, but Commissioner Rohy indicated earlier that some say biofuels are not a clean technology. We'd be curious in knowing who says that and on what basis that judgement might have been made by other parties.

PRESIDING COMMISSIONER ROHY: I'm not referring to anyone in particular. I didn't want anyone to come to that conclusion and exclude biomass. It was a backward way of being positive. I apologize if I've --

MR. JUDD: Appreciate the clarification. Hit me. Palpitating there for a minute.

Commissioner Sharpless earlier has been asking parties for examples of what they mean when they talk about a need for public interest RD&D funding. I can give you some examples out of the biomass side. To give you a sense of what we are thinking about in this area, we are certainly looking at ways to promote O&M cost reduction in our industry.

This would include research projects on protective coating technologies applicable to combustion membrane tubes and backpass super heater tubes which will be more abrasion and corrosion resistant than current ones. Other related issues in metallurgy. In fact, not dissimilar to those that have been discussed and put forward in the past by your Energy Technology Advancement Program.

Improved refractory applications.

Another area for us that would reduce our cost and provide environmental benefits is further work perhaps with the university on market opportunities for the ash that we generate. There is a hesitancy in the agricultural community on the land spreading of this ash because they don't have enough information, and it provides a barrier to the full use of this.

Thirdly, fuel permitting. Now any time one of our biomass plants would like to use a new fuel, let's say rice straw, for instance, on a plant by plant basis you have to go through a process with a local air district for each fuel. It costs us 50 to \$150 million, and then if you wanted to do it with a plant that was ten miles away you'd have to spend the same 50 or \$150 million again.

We would propose, again with the involvement of the Air Resources Board and CAPCOA, a project that could do generic review of various fuels and within the same lab analysis predict the analysis of the by product ash that would result from the combustion of fuels type by type.

I had asked our members for ideas on R&D things, and I have a list, a substantial list, which we need not get into now. There are other opportunities as well. And I'll give you a good example.

The Central Valley Air Pollution Control District is very concerned about particulate matter in the Valley, particularly in light of new federal proposals. They would like to examine, with the help of technical experts and growers, the possibility of

cooperative ownership of biomass plants in which the generators of the material used as fuel are those parties who then buy back the electric output at wholesale. Kind of a closed loop system, if you will. Substantially lower the cost of the electricity from biomass fuel plants. But there needs to be a look at the inherent benefits, the offsets and ag burning and all that.

So these are the types of projects, practical projects, that will lead to cost reduction in the electricity that we generate. Fuel handling systems are another way to do it. The rice industry, for example, has a huge problem with rice straw. The problem they have with rice straw is it's too expensive to get it out of the field. It's about \$30 a ton for them to get it out.

If in collaboration with the university equipment were designed that would allow them to remove it faster and much cheaper, it would solve the air emissions problem that comes from dealing with this rice straw. It would also provide a fuel at a lower cost, therefore, lower cost of electricity.

So those are the first cuts at the kinds of projects on the applied technology side, and on the short to mid-range rather than the longer range projects that other larger research organizations may put forward. And we would want to simply be sure in the end of this development of the report that these kinds of projects in our industry and maybe similar types of projects in the geothermal and wind side are not ineligible for consideration in a competitive process.

All in all we find this to be an enormously useful and well said report. We have very little concern about the quality of the

report or concern about ultimately the end product, but we make these notes for consideration as we go forward.

PRESIDING COMMISSIONER ROHY: Thank you, Mr. Judd.

MR. JUDD: Yes, sir.

PRESIDING COMMISSIONER ROHY: I have a question. When you say that you and I emphasize applied as well as basic, do you think the report is biased one way or another the way it's written?

MR. JUDD: I don't think it's biased, but I don't think it's explicit in recognizing the value of applied research to the extent that we would like to see it. It seems to have a feel that, and this is maybe only perceptual on my part, but that it may be more geared for larger multi-year projects at the expense of shorter term projects that will have a more immediate recognition in the marketplace.

PRESIDING COMMISSIONER ROHY: And as to your comment on process improvement, I really appreciate your bringing that up. I've spent most of my life in industry, and I know how important process improvement is, so I think it's a good point.

MR. JUDD: There are, oddly, we have been in touches in industry with a company we didn't know about that had been around for some years and had worked successfully in coal fired plants and other plants that has a very sophisticated program for optimizing boiler efficiency that might give you two percent, two and a half percent gain in your boiler efficiency. And that's the kind of process improvement that we're happy to learn about and there may be others as well that will help us keep our costs down,

therefore our prices down as well.

PRESIDING COMMISSIONER ROHY: And my last question on review committees I understand your point about including IPPs and bio generators, but I have to ask my old question, how many people would you see on a policy review committee?

MR. JUDD: I think on the policy review committee, on the big committee separate from the working groups, that you could ask the existing renewables industry to nominate one or not more than two parties to represent the various parts of the industry. I don't think you need nor do I think they want to, each of the five or six technologies, each to have a person there. I think you could get a designated representative or two at most.

PRESIDING COMMISSIONER ROHY: Thank you.

Jan.

COMMISSIONER SHARPLESS: I guess I would only note that Mr. Judd did allude to the renewables report and the interface between the emerging monies in that report and the possibility that some of the projects that had been discussed during the proceedings might fall within, more appropriately, within the RD&D category. We've had that discussion. I've also had that discussion with Dave, Commissioner Rohy. We have set up a definition that I actually think precludes anybody qualifying for emerging money to be in an RD&D category.

It requires that a facility be up and operating at least one year. I don't see how that falls into the RD&D category. And so if Mr. Judd has any additional examples, not this afternoon, but if he would like to provide those in writing, we'd be happy, I

think, to see where he sees those issues falling.

PRESIDING COMMISSIONER ROHY: Thank you.

Mr. Mark Berman from representing Davis Energy Group.

MR. BERMAN: Thank you, Commissioner Rohy. I am Mark Berman with Davis Energy Group. I'm Director of Business Development for this ten-person engineering firm which is focused on efficient cooling and heating systems.

We have invented and developed a number of products. We actually do RD&D. And they include, for example, residential and commercial air conditioning systems that don't use refrigerants, and that use about half the energy or less with more traditional systems. Some of our work has been funded by the Energy Commission through the ETAP program.

Please consider my comments to be on behalf of Davis Energy Group, but as an example of small to medium-sized organizations that actually do research development and demonstration projects. Unfortunately I've not seen many other small organizations like ours here in this process, but I would hazard a guess as to why. Of ten people in our small firm, three are support people, six are engineers, there's one that might be designated as a businessman, and you're looking at him.

Firms such as ours typically cannot afford the time to contribute heavily in a process such as this. So consequently, I would suggest that we might be considered representative of hundreds of firms that California is blessed to have in its midst. One- and two-people firms, five- and ten-people firms, twenty-person firms that actually are very creative, very

innovative, spew out a wealth of technology and patentable inventions and are, perhaps, the unsung heroes of the research, development and demonstration world.

The report, the RD&D report, as I've read it, talks quite a bit about block awards and alliances between the Energy Commission and other large research institutes. And I think this is a good point. This is good to a point is perhaps what I should say. These kinds of alliances and block awards certainly have a place in the RD&D world.

But we have a concern. If it's over done, and it can easily be over done, this can add to overhead, and we can see an increasing fraction of RD&D money being used to administer the program by the Energy Commission and to re-administer it by the research institutes that receive these block awards.

The California Energy Commission has been very effective in our opinion at funding RD&D projects directly. For example, through the ETAP program. We would urge the Energy Commission to retain a majority of RD&D funds to be allocated directly to specific RD&D projects. And these should include a significant share for small and medium sized firms such as ours that put forward these kinds of proposals and projects.

As I mentioned, these firms are perhaps disproportionately responsible for a lot of the creativity that goes on in the world today.

The second thing that we would urge is that you keep the funding process straightforward, quick and simple. And I suspect that everybody behind me would be behind me in that comment.

And finally I would leave you with this thought, and I would ask that you keep it in mind as you design this process. Ask yourselves, if you would, if Thomas Alva Edison walked through these doors and presented a proposal to do research and some development work and demonstrate a new product, would he get through the process.

Thank you.

PRESIDING COMMISSIONER ROHY: Thank you for your comments. There's two parts to your last question, though. Would he get through it, and would he want to get through it.

[Laughter]

MR. BERMAN: Yeah, and after he got through it, would he walk away with support?

PRESIDING COMMISSIONER ROHY: Commissioner.

COMMISSIONER SHARPLESS: Yeah, I had one question. There was some criteria that was spelled out, I believe it was this morning. Michael, wasn't that in your slide presentation? I guess I would ask Mr. -- is it Berman?

MR. BERMAN: Yes.

COMMISSIONER SHARPLESS: Whether or not he saw, first of all, were you here for that presentation?

MR. BERMAN: No, I was not.

COMMISSIONER SHARPLESS: Oh, dear. I don't know whether that paper is out there, isn't it, Michael?

MR. DeANGELIS: It's actually in the report. I was merely summarizing the report, and I can refer you to the pages in the report where it is in.

COMMISSIONER SHARPLESS: Good. I wanted to ask Mr. Berman if based on his comments if he saw anything in the criteria that would inhibit medium to small firms qualifying for the money, i.e., the Thomas Jefferson award.

MR. DeANGELIS: The criteria listed on pages 310 and 311 of the working group report.

COMMISSIONER SHARPLESS: I assume since you're listed as one of the sponsors of the report that you've had an opportunity to review this before. But I recognize that there have been tradeoffs, and so I would like to sort of get your view of how you see this criteria affecting medium and small firms such as yours.

MR. BERMAN: Right. I did have an opportunity to review the report prior to coming. And I would say that in reviewing the criteria listed, no, I did not see anything that would preclude a small to medium sized entity from proposing a project and successfully moving through the process.

Of course, from this report to a definitive process, there are a number of steps, and the process can come out simple and straightforward or it could be strenuous and convoluted. But, no, I didn't see anything intrinsic.

What I did sense, for example, looking at page 4-3 and 4-4, funding guidelines and mechanisms, what I did sense was that there's a healthy recognition, let's put it this way, and a fair amount of discussion about coordinating with existing institutions, research institutions, about block awards and that sort of thing. And I began to look for, well, gosh, where does a Davis Energy Group or a Thomas Edison fit into the equation. Is

there sufficient room.

And all I'm suggesting is that you ask yourselves that question as the process is pulled together so that other institutions, which, by the way, we work with on a regular basis utilities and others. They definitely have a place in the world, and we've been fortunate in that they feel we have a place in the world, too, and we work with them all the time. However, they certainly have more resources than we, and there are situations, for the example the two products I mentioned where it's appropriate for a smaller firm to take the lead and run with a project.

We want to be sure that we've got the capability to make that presentation effectively and have enough funds left at your discretion after the other larger brethren in the world have taken their share so that you can say, yeah, that's a damn good idea. Maybe it will work, and maybe it won't, but, boy, if it does, it's going to save us a lot of energy and do a lot of good for the people of California.

We want to be sure you've got sufficient funds left to underwrite such marvelous efforts.

COMMISSIONER SHARPLESS: I guess I would ask perhaps Staff if they could comment or react to that comment as to whether or not there is, in the writing of this report, if there was any bias one way or the other.

MR. DeANGELIS: I think Staff believes that there was no bias intended. And if there is any bias, I think I'd like to see it pointed out.

Certainly there was nothing intended, and there's fully recognition of the needs for small businesses and of substantial innovation and creativity comes out of small businesses that needs to be a part of the public interest RD&D program.

COMMISSIONER SHARPLESS: Would we be addressing the concern about simple straightforward in the operational plan? Is that where that comes up, or is that in the protocols for the request for proposals? Where does that come up?

MR. DeANGELIS: Well, it will be addressed in the implementation of the program to the operational plans in a number of different areas. I think we have talked about contract streamlining briefly. There's a number of issues associated with that, some of which are in the legislation; but there are also internal issues associated with contract streamlining which we think affects small businesses significantly.

There also is actual program design questions which will have to be answered. The number of solicitations, the type of solicitations, how we focus those solicitations, those are all questions in the operational plans that we have to address.

COMMISSIONER SHARPLESS: And the advisory committees will be helping in putting some of those details together?

MR. DeANGELIS: That's our initial thoughts, yes.

COMMISSIONER SHARPLESS: Mr. Berman, with your 10- person firm representing small and medium businesses throughout the world, going to be available to provide some input?

MR. BERMAN: Yes. Yes, the operative word being "some," but, yes, absolutely, and thank you.

COMMISSIONER SHARPLESS: Okay.

MR. TANTON: Perhaps you were not here this morning for the announcement, but there is an internal working draft of some proposed legislation to implement this provision of 1890. I think it's available on the back counter. We've asked for informal commentary on that.

There's a section of that that's summarizes the selection criteria that Mike just referred to in the strategic plan. You might want to take a particular note of that and make sure that it's, as we move forward, it doesn't inadvertently include something that would be to the disbenefit of small firms like yourselves.

MR. BERMAN: Will do.

Thank you.

PRESIDING COMMISSIONER ROHY: Thank you very much for your testimony.

MR. BERMAN: Thank you.

PRESIDING COMMISSIONER ROHY: Mr. Tod O'Connor, Southern California Edison. Future chair of the CURC.

MR. O'CONNOR: I'll take this if drafted, I won't serve. I thank Frank for his skillful stewardship so far this year of CURC. His shoes will be hard to fill next year unless he wants to sign up for another year. Everything's up to negotiation, Frank.

Good afternoon, Vice Chair Rohy and Commissioner Sharpless. Thank you for the opportunity to be here today. My name is Tod O'Connor. I'm a Manager in Southern California Edison's Research and Technologies Applications Department. I'm here to briefly

summarize Edison's written testimony concerning the proposed public interest RD&D strategic plan.

First of all, Edison would like to commend the RD&D Subcommittee for its role in developing the plan, and in particular for facilitating the collaborative process which enabled a variety of public interest RD&D stakeholders to participate and contribute to the plan's development.

We share the Commissioners' recommendations for the fine work led by Mike DeAngelis, Ron Kukulka, David Abelson and other CEC Staff who were instrumental in accomplishing this task.

Edison's testimony focuses on two areas discussed in the plan. Edison supports the plan but believes these two areas need to be developed further. One is environmental RD&D, and the other is system reliability RD&D.

With respect to environmental RD&D, I will be brief. We agree with EPRI's approach with respect to it needs to be discussed in further detail. It's a collaborative effort. It looks to utilize the proven experience of environmental RD&D stakeholders. They have background, and they have worked on environmental R&D projects that provide public benefits to the State of California. And we encourage the Committee to at least look at the issue in greater detail.

We also agree with the letter. Obviously that was sent under our signature earlier this month. And we also encourage the Committee to initiate a series of workshops or forums to look at the issues in environmental RD&D in greater detail than were discussed in the plan. Time did not allow us to get in greater

detail, but the plan did provide a good basis for discussion.

And in closing on environmental RD&D, Edison is mindful of the strategic plan should preserve the value in environmental RD&D currently undertaken, either individually by the utilities or in collaboration with each other and other various stakeholders.

On system reliability RD&D, we recognize up front that there's much education to be done as to why this area should be covered as public interest RD&D. We propose that the Committee emphasize system reliability RD&D throughout this public interest RD&D program. Such treatment is warranted for several reasons.

It cuts across the identified portfolio focus areas. It's paramount to some of the major areas that were raised in the plan. Both the legislature in AB 1890 and the PUC have stressed the importance that the public purpose program surcharge be used in part for system reliability. In its February 5 decision the CPUC gave the utilities an option to negotiate with the CEC to conduct system reliability as part of public interest RD&D.

Restructuring will emphasize customer choice. As a result the state will have a vital interest to ensure that Californians enjoy an uninterruptable power supply supported by a statewide fully integrated transmission distribution system. The memories of last August 10 is still very vivid.

Therefore, system reliability meets the public interest RD&D definition by, one, enhancing T&D systems efficiency, reliability and capacity, managing load capacity of its transmission lines and substations, and increasing usage of power grid assets.

The intended system reliability RD&D beneficiaries are not

just the ratepayers. They're Californians. And since they benefit Californians, system reliability RD&D as part of public interest RD&D is consistent with, one, the key governing principles of the AB 1890 RD&D working group report that all public interest RD&D intended beneficiaries pay.

Edison recommends that the following objectives for system reliability RD&D be incorporated into the strategic plan:

One, given the anticipated demand on T&D systems due to restructuring, a multi-year approach is the most efficient and effective way to conduct system reliability RD&D.

Two, system reliability RD&D programs should ensure continuity of existing T&D RD&D projects. This would preserve the value of existing collaborative partnerships on in-progress projects.

Three, system reliability RD&D funds should be administered through a pre-authorized allocation mechanism which would be the most cost effective and efficient way for the CEC to supervise this area. This approach would optimize the utilities' proven experience to conduct system reliability RD&D projects, especially given their demonstrated ability to collaboratively leverage those funds.

And finally, system reliability RD&D would be subject to appropriate accountability and review.

To meet these objectives Edison is recommending that the CEC adopt the system reliability RD&D criteria mentioned in the CURC testimony earlier this morning. And for the sake of time I won't repeat it.

In conclusion, Edison is grateful for the opportunity to discuss these issues with you and willing to continue to work with you and the Staff in efforts to establish a responsive public interest RD&D program benefitting all Californians.

Thank you for this time.

PRESIDING COMMISSIONER ROHY: Thank you, Mr. O'Connor. I think Commissioner Sharpless wants to start with a question. I see the gleam in her eye.

MR. O'CONNOR: So do I.

COMMISSIONER SHARPLESS: I guess you heard my earlier comments to Frank, and, of course, Commissioner Laurie who had to leave and is not here at this time, but I think they remain on the table, and I wanted to give you an opportunity.

They're fairly straightforward.

MR. O'CONNOR: Sure.

COMMISSIONER SHARPLESS: And you emphasize public interest. Well, I also think that regulated RD&D is public interest RD&D. It happens to be regulated because those two functions are still monopolies. Distribution is a monopoly and transmission is a monopoly, and, therefore, under those systems, as they have operated in the past, there is room for RD&D funding in both of those areas.

I think the practical reality that has come up in the discussion is were it not perhaps for the caps, the bump, the tail, and whatever else we have in the next four years, perhaps the utilities would be pursuing a different strategy in terms of the RD&D funding for transmission and distribution because they

would have room, perhaps, to go to the CPUC and ask for regulated ratepayer RD&D for transmission and distribution as you have in the past.

But putting that aside, and perhaps you can speak to it, the other issue that I have is recognition that there are lines that this collaborative have talked about in terms of what's regulated and what is public and what will be private. And these lines do cross in circles. We've all seen the charts with the circles. And so there is a blurring.

And as PG&E mentioned earlier today that as we evolve into a competitive world some of that that has been done in the regulated world might be now viewed as public. And I think we're going to have to sort through that issue, and there's not a lot of specificity because we're talking now in sort of general theoretical, that's why I keep asking for examples.

The CPUC apparently had specifics that they got from the utilities, and the utilities' specifics identified \$700,000 worth of public interest T&D funding. And now the utilities are saying, no, that's not exactly right.

Okay, be that as it may, I guess one of the issues that I need clarified is if you use words like "system reliability," is there a definition for that? What does it mean? What's included in it? Why is it public? Is part of system reliability both public and regulated? And how does this Commission differentiate between the two?

MR. O'CONNOR: Those are very good questions. Those are questions that the Committee needs a lot of discussion on.

COMMISSIONER SHARPLESS: I assume the Committee or the collaborative actually did discuss that, and they came up with the focus areas that they came up with.

MR. O'CONNOR: We did not get into a substantive discussion on the merits of system reliability because of the time frame of other important issues that were before the working group.

If I may, and some of these questions may take some time, but I'll be glad to answer them. And if further clarification is needed, we'll be glad to provide those in writing.

With respect to the term "system reliability RD&D," let me make it clear the utilities did not invent the phrase. It was used first in the legislation, AB 1890, it was referenced explicitly in Section 381(b) and were talk about the two basic objectives for the public purpose program surcharge. It would be used for programs that ensure system reliability and provide in state benefits. That's in the language.

The legislature used that term. I think it would be helpful in Committee's deliberations with the legislature to find out what they meant by it because that would be helpful.

Number two, on February --

COMMISSIONER SHARPLESS: They might say they got the language from the utilities. And then that puts us chasing our tail.

MR. O'CONNOR: Again it would be, you know, we try to give our impression what was meant by legislative intent earlier this year, and the CPUC had a different interpretation.

I do want to put on the table now, but I'll get back to it later so I won't be remiss in addressing what was meant by the \$700,000 that the CPUC reserved for itself on the public interest RD&D; but let me get to that in a little bit later. I don't want to leave the table without addressing that.

In terms of what does system reliability RD&D meant, means in February, in the colloquies by several CPUC Commissioners on February 5 when they issued the decision, President Conlon, and I quote, stated the following:

"I remained concerned over the decision split of the R&D money between regulated utilities and the Energy Commission. I want to ensure that the R&D that improves the system reliability is adequately funded. As the decision notes, the utility can request funding for these programs from the Energy Commission.

"Finally I will note," again I'm quoting President Conlon, "Finally I will note for the record there will be filing a concurring opinion to the decision that will emphasize my discomfort with the split of the R&D between the utilities and the CEC and suggest changes that could be made through a legislation that will allow for modification to this decision."

Commissioner Bilas on the same day, quote, "But I want to go on record as urging the California Energy Commission to carefully consider requests made to them by investor owned utilities, because the investor owned utilities, I believe, do need a source of funding for some of their reliability efforts, and I would urge the Energy Commission to carefully consider."

End of quote.

So the term "system reliability" has been used by the legislature and several CPUC Commissioners, and again I would suggest that this subcommittee in continuous dialogue with the CPUC to see how they want to interpret the phrase "system reliability RD&D." And we'll be glad to provide any kind of backup to that kind of effort.

COMMISSIONER SHARPLESS: Okay. Now the mission statement uses the language that in order to improve the quality of life for California citizens by providing environmentally sound, safe, reliable and affordable energy services and products that we conduct and coordinate public interest energy research. The mission clearly states that reliability will be a consideration in the decisions.

So tell me now your concern why we need to add additional language for systems reliability, as though the focus areas currently, you could say, also encourage system reliability. Every single one of them.

MR. O'CONNOR: Again -- excuse me.

COMMISSIONER SHARPLESS: And the debate seems to be that there's something missing even though energy efficiency is system reliability; advanced technology, generation technology, is reliability; renewables is reliability; and there's a fourth one that I'm missing, but I would dare say that it's probably a reliability issue, too. So what's missing?

MR. O'CONNOR: I think what is missing is --

COMMISSIONER SHARPLESS: Because systems reliability sounds like an umbrella term.

MR. O'CONNOR: Again, not knowing specifically directly what the legislative meant, it was our interpretation or our understanding of system reliability encompasses but is not limited to those transmission and distribution RD&D projects, though not all of them, that will provide for an uninterruptable power supply into California. I mean all Californians benefit from that.

And that gets back to the question of overlapping non-bright line definitions between regulated and public interest RD&D.

COMMISSIONER SHARPLESS: Where do you see the connection between what the ISO must do in order to assure reliability and the public RD&D here at the Energy Commission? Because certainly the ISO is charged with reliability as well, and I would think that they would be interested in assuring reliability, and that they're going to take steps, whatever they might be, to do that. How do those two things interface in your mind?

MR. O'CONNOR: You ask me to be presumptuous as to what the ISO would require. I can only suggest that answers to your question can be specifically found in the legislation. The legislation created the ISO, and it also addressed the need for public purpose programs to conduct programs that would benefit and ensure system reliability.

COMMISSIONER SHARPLESS: Okay. I think I've gone about as far as I can go here.

You wanted to say something about the \$700,000?

MR. O'CONNOR: Yes. That was interpreted by the CPUC in the February 5 decision essentially for what was phrased public interest T&D RD&D. Specifically what was meant by that based on

our reading of the decision was primarily for EMF activities.

And to get in detail a little bit more with CURC's proposal that that activity be transferred over to the CEC because it provides public interest to all Californians. And you believe that program could be administered more efficiently as part of the overall public interest RD&D program here than have it under specific costs and benefits and ratepayer benefits analysis tests under the CPUC.

PRESIDING COMMISSIONER ROHY: So you're saying that entire \$700,000 was for EMF work.

MR. O'CONNOR: Yes.

PRESIDING COMMISSIONER ROHY: That is your position.

MR. O'CONNOR: Well, if you take a look at the division and at previous rate cases of what was allowed for EMF research, it comes out, for Edison anyways, it comes out to about the same.

COMMISSIONER SHARPLESS: And why was it that the utilities identified only EMF as the T&D type of activities that the CPUC would likely fund?

MR. O'CONNOR: We --

COMMISSIONER SHARPLESS: What was the thinking there?

MR. O'CONNOR: Again, you were going back to the previous discussion on the AB 1890 workshop and the legislation in trying to interpret what was meant by public interest RD&D. I think it's important, and I apologize for taking time, to go back and take a look at how the working group looked at funding public interest RD&D in its scope of activities.

It was just focus in on some of the focus areas. However,

the language, and the utilities interpret it, in the language of AB 1890 expanded the scope of activities to include system reliability RD&D. And that the language, and, David, you can help me out on this since I think it's 381(f) that talked about the language of the T&D programs that would be supervised by the CPUC, there was reasonable interpretation that that might be all T&D work.

It was the legal briefs by other parties that pointed out that, no, what was really meant by the legislation was public interest T&D RD&D. It wasn't the utilities who used that phrase, it was the other parties who submitted briefs to interpret that section.

MR. ABELSON: The only clarification I could offer to what Tod is recounting, and we, of course, filed extensive briefs on this, I don't want to take time today to go back over that issue, is that the utilities took the position that everything that wasn't EMF was regulated and should be funded out of the public goods surcharge. And the Public Utilities Commission simply told them if it's regulated, get it out of your base rates.

So that was the source of that. I think that they basically construed public interest RD&D very narrowly, and when they got a result that they are not very happy with, they have now reconfigured their words and have begun to talk about regulated RD&D as being the equivalent of reliability for systems. We began to see that in their comments on the draft decision at the time.

Again, I think the bottom line policy calls, I indicated this morning, is clearly, you know, up to you folks as to what you're

going to do in terms of how much of their regulated program will be funded out of this budget, but I think that is the issue.

COMMISSIONER SHARPLESS: Thank you.

MR. O'CONNOR: Thank you.

PRESIDING COMMISSIONER ROHY: Tom has a comment.

MR. TANTON: I have a couple of real quick questions.

PRESIDING COMMISSIONER ROHY: Okay.

MR. TANTON: The first one is do you or does Edison consider the independent system operator to be a regulated monopoly?

MR. O'CONNOR: I cannot speak for myself. I think Edison, and I can't speak for Edison since I haven't seen any official language that gives it that kind of designation. We see ourselves that's to the degree we can supporting the ISO.

MR. TANTON: Okay. My other question has to go with what things were included in the strategic plan and what things were not included in the strategic plan when Edison signed the document that we're considering here today?

I'll try to make this as clear as I can. It's my understanding that Edison signed that strategic plan because they could agree with everything that was included, but that within the consensus process there was not unanimity or even consensus on what things should be excluded. Is that a fair statement?

MR. O'CONNOR: So far, yes.

MR. TANTON: Okay. And the extent to which this is an input to the R&D Committee and subsequently to the Commission, you're taking this opportunity to raise those concerns about

things that you believe should have been included but could not have reached consensus as well as those things that you believe should not have been included.

MR. O'CONNOR: I was with you up until your last several words.

MR. TANTON: Okay. To the extent that something was excluded.

MR. O'CONNOR: Correct.

MR. TANTON: It was not the consensus of the group that it should be excluded. It was simply not the consensus of the group to include it.

That didn't help any either, did it?

MR. O'CONNOR: Well, depending on the particulars, depending on the particulars. This reminds me of first year law school, by the way.

PRESIDING COMMISSIONER ROHY: I was going to say. We'll have to get Mr. Abelson over here.

MR. TANTON: Let me put it a little more clearly. Did the group reach a consensus or was there disagreement on including system reliability?

MR. O'CONNOR: The group did not reach a consensus on including system reliability as a focus area. There was only time, because of the time frame this subcommittee is working with, to get a plan in objectives to the legislature to include system reliability as part as one the strategic focus areas.

MR. TANTON: Okay, now let's turn that question around a little bit. Did the group reach a consensus that it needs to be

excluded as a topic?

MR. O'CONNOR: No. To the best of my ability, but Staff is shaking, is agreement with that.

MR. DeANGELIS: Let me try to address this because I do really recall that it was raised. It was raised before the entire group, but it was also discussed in the conference call that was reviewing the plan. And my recollection, and I think it's very clear, was that it was rejected in the group process on the conference call.

It was raised, discussed as a potential focus area and rejected in the conference call that we had. And I think there were others, at least one or two I'm seeing shaking their head, yes, that they recall the same thing, so.

MR. ABELSON: Could I just add one other piece to that for clarification. I think that as the issue evolved, I think what Mike has just said it certainly confirms my own recollection, but I do think, and I remember Tod specifically talking with me. And we did make some accommodation, and it is reflected in this report in this section that talks about strategic -- help me, Michael -- strategic --strategic energy research, which is research beyond the four specific areas that are listed. They could be cross-cutting. It could be something outside one of those four areas. It could be orders of magnitude research.

PRESIDING COMMISSIONER ROHY: In fact the words are "system related" as I read right here.

MR. ABELSON: Yes. And those were put in specifically to accommodate the concerns that Mr. O'Connor is raising.

PRESIDING COMMISSIONER ROHY: So there could be some system related R&D under strategic energy, is that what?

MR. ABELSON: Absolutely. And clearly the report suggests that. And when you combine that, Commissioner, with the what we called in the report the mission statement, the part that, Commissioner Sharpless, you read a moment ago which says that, you know, the purpose of this entire effort is to further clean, affordable, reliable energy. I think that there certainly are opportunities. It's in no way absolutely foreclosed.

MR. TANTON: Just for the sake of the record, if I may.

PRESIDING COMMISSIONER ROHY: And try to do it short this time, Tom.

MR. TANTON: Yes, I will.

Mr. DeAngelis noted a few moments ago the affirmative shaking of a few heads in the audience. I think the record would benefit by also acknowledging that there are a few heads shaking on the negative sense, too.

PRESIDING COMMISSIONER ROHY: Mr. O'Connor, we thank you for your testimony today.

MR. O'CONNOR: Thank you for this opportunity.

PRESIDING COMMISSIONER ROHY: Ms. Sheryl Carter. And you're willing to step up after that.

MS. CARTER: Thank you. I'm Sheryl Carter with NRDC. I'll try and keep it brief. A lot of things have been covered, but I'll just pick and choose a few important ones.

First of all, let me say that we support the strategic plan report, and we urge the CEC to adopt it. We also, I also join in

with others in commending the Staff for the wonderful work they did in keeping this herd of cats together.

The first issue I want to address is the focus areas. We support and urge the CEC to do the same. The four focus areas that were recommended in the report, there was extensive debate, which you've heard about, and compromise from a wide variety of parties to arrive at these areas. They are a focus. They are important for direction, but they still leave the CEC much room for flexibility since these are not exclusive, and it also does not delineate the resources for each of the areas.

As far as the issue of reliability is concerned, we agree that system reliability is important. We also see this issue as an over-arching issue and not a particular focus area. That's another reason we don't feel it should be one of the four focus areas.

The Commission is definitely going to have to deal with what in system reliability is public interest and what is not. But as far as suggestions, I do have one suggestion for language in the draft legislation that may help parties. I personally agree with what's here and like what's here. But one thing short of adding reliability, system reliability, as another focus area is if you look under (b) where these focus areas are discussed on page two of the draft --

MR. TANTON: And you're referring to the draft legislation that was on the back table.

MS. CARTER: Yes.

MR. TANTON: Thank you.

MS. CARTER: Yes. And this is just a suggestion, and it's something that I have had discussions with a couple of utilities, and I think this is acceptable. It will bring the issue of reliability more up front but not make it a specific focus area.

And that would just be changing the end of the first sentence which now reads, "that addresses California's energy needs and technology opportunities", to "addresses California energy needs, technology opportunities, and reliability."

It's a simple change, but it's one I've bounced off of people, and it may help.

COMMISSIONER SHARPLESS: Excuse me. I'm a little slow here. B? Thank you.

MS. CARTER: Yes, sorry. Right at the top of the page two. The first sentence.

COMMISSIONER SHARPLESS: Okay. So you're in the first sentence.

MS. CARTER: Yes. And it's just adding reliability to energy needs and technology opportunities. It would add "and reliability."

COMMISSIONER SHARPLESS: So you would say "California energy needs, reliability and technology"?

MS. CARTER: Or putting reliability at the end. I don't think it much matters.

COMMISSIONER SHARPLESS: Oh, okay, whatever.

MR. TANTON: There's intended priority by the order of listing.

MS. CARTER: No. No, not at all. That's just a

suggestion, although I think it's one that at least a majority of the parties could probably live with.

Just to respond to a couple of comments related to the focus area from this morning, there was one comment that sounded like anything outside of the four focus areas would have to meet a higher standard. What I believe we discussed and decided on in the group is that all projects, whether they're in the focus area or not, would be based on merit and would have to meet the criteria that are established under the plan.

So I didn't want that statement to be implied as the four focus areas would not be based on merit criteria.

PRESIDING COMMISSIONER ROHY: But are you standing with the idea of a higher standards for those that are not in there?

MS. CARTER: I don't believe that we discussed that. I don't remember discussing that at all, so, no, that wasn't.

PRESIDING COMMISSIONER ROHY: You don't recall.

MS. CARTER: I don't recall that, and that's not a position we've taken.

PRESIDING COMMISSIONER ROHY: Thank you.

COMMISSIONER SHARPLESS: I guess the point --

MS. CARTER: They should all be held to a very high standard.

COMMISSIONER SHARPLESS: Yes. I guess the point you made is that what is that higher standard. You're not suggesting a lower standard.

MS. CARTER: Well, yeah, I mean I feel like we have a list of criteria here which will be more developed in the operational

plan, and we've decided they're all going to be based on merit.

MR. TANTON: And it is then the same level of merit, whether they're in the focus area or not.

MS. CARTER: But they are focus areas.

MR. TANTON: Yes.

MS. CARTER: I mean, right.

The other related to the focus area, the other comment, was a comment by Mr. Raskin this morning. We don't agree that "clean" should be taken out of the definition under environmentally preferred technologies. The category is environmentally preferred technologies, and we agree with the Staff that the whole fuel cycle must be taken into account, and we do have a problem with the inclusion of coal and petroleum as a clean environmentally preferred technology I should say.

COMMISSIONER SHARPLESS: But how do you square those two things if you're looking at the -- I certainly understand what the concern is about some of these fuels.

MS. CARTER: I might suggest that we use "environmentally preferred technology" instead of "clean" which is the title of the category in general. I think, you know, there potentially may be, you know, some projects that might use coal that might fit under this. I'm not ready to say that that's an environmentally preferred technology, but that's not excluded from this program in general. I just don't think it fits under the focus area.

COMMISSIONER SHARPLESS: So your suggestion would get rid of the "clean fuel" word and use instead the --

MS. CARTER: Well, if the definition for that is a problem,

it might be easier. It might not be, too. It might be easier for me it's easier to define environmentally preferred technologies. It's just a suggestion. It's an alternative that may be easier to work with.

The other concern that I have is where the line is drawn between demonstration and commercialization. And this has been a hotly contested issue, and it's already been brought up. And this also has consequences for the line between private and public interest as well.

I just want to caution you to be very careful, which I'm sure you will be, and aware that it is a blurred line, and this is a limited pot of funds, and that this doesn't become an emerging technologies fund or a market transformation fund, both of which we already have.

And finally, I wanted to urge the Commission to just pay special attention to the already ongoing projects that fit into the public interest rubric, and we do support PG&E's suggestion in their letter to set up a forum to discuss environmental research. And that said we'll do anything, or what we can, to support the draft legislation at the legislature. Thanks.

COMMISSIONER SHARPLESS: In line with your comment on the line between commercialization and demonstration, I don't know if this is where that issue comes up, but on page 2-3 under the objectives section --

MS. CARTER: Objective 4?

COMMISSIONER SHARPLESS: Yes. We have options. And when I read these words, you know, maybe that issue comes up in those

objectives, and I would like maybe some feedback from you as to your feeling on, do you have the report, maybe not?

MS. CARTER: I don't have it in front of me, but I remember there were three options.

COMMISSIONER SHARPLESS: (A) starts off saying that RD&D projects that are connected to the market.

MS. CARTER: Right.

COMMISSIONER SHARPLESS: (B) starts off by saying projects that will foster. And (C) talks about ensuring the relevance of the project portfolio to the state's economy.

MS. CARTER: I wasn't particularly comfortable with any of the three. I was most uncomfortable with the second one. I have a concern. I do feel that these projects should have, we should have some kind of use in mind when we start off these projects, but I have a problem directly connecting them to the market. You get into the problem there of possibly only covering short-term research that might already be covered by the private sector. It restricts, I think, the programs a little bit.

I think I'm least uncomfortable with Option A if I had to choose, and most uncomfortable with Option B. There seems to be more of an emphasis in Option B on the market and on commercialization. If that helps any.

I, unfortunately, was not able to spend a whole lot of time, and so did not come up with my own alternative that would have been better.

COMMISSIONER SHARPLESS: You would also probably be well for you to take a look, since you just received this, but be

interested in your feedback at looking at in the proposed legislation. Maybe this also comes up under criteria to evaluate proposals. I don't know where else this issue might, you know, be embedded.

MR. DeANGELIS: And I think an important point is in the legislation. I think 4(a) was included as part of the legislative intent, so we may want to take a look at that again. I think it's listed --

COMMISSIONER SHARPLESS: Good. Well, you have 4(a), and then you have the criteria that has greater specificity that defines 4(a) that may weaken it or strengthen it.

MS. CARTER: I'll definitely look at that closer. I haven't had a chance to look at it.

PRESIDING COMMISSIONER ROHY: I have some concerns in this very same area here. When I looked at the four focus areas, and I think it's been called out by many witnesses one is a bit different than the other three. And that's the environmental one. I don't necessarily see products that will be commercialized coming out of that particular focus area. It may be. We might have cleaner combustors or something like that, but not necessarily every environmental program will have a product.

MS. CARTER: Well, exactly, and not every research program undertaken under this effort will result in commercialization. I mean it may be an early stage project.

And my problem with this is the same. I don't want to preclude earlier stage research projects just because by the end of that research project, you know, the two-year, one-year,

two-year funding, whatever, you're not going to have a product or a service out into the market.

PRESIDING COMMISSIONER ROHY: Let me tell you the second part of my concern, though, is if we wind up with four years and no products, there will be no fifth year program.

MS. CARTER: Exactly. And I think we all share your concern in that one, and we did specifically discuss in the working group having a balance between those types of programs, and that's why we put an emphasis on a portfolio.

PRESIDING COMMISSIONER ROHY: Some near term, some mid term, some long term. Right?

MS. CARTER: All in the public interest.

COMMISSIONER SHARPLESS: I do believe, though, and perhaps this is just my sensitivity as a former regulator in a formerly very controversial environmental area, that environmental research, RD&D, does, in fact, have direct products. It determines whether or not some technologies are going to get permitted or not. It determines whether or not you can mitigate the environmental impacts in some areas.

So I do, in fact, see that what we focus on in the environmental area does have a direct feed into the commercial interests and the public interests. Whether you're looking at water, whether you're looking at toxics, whether you're looking at land use, whether you're looking at our friends from Sierra Club on the wind machines, they have a direct impact on whether or not something's going to be able to be commercially viable.

MS. CARTER: Right. And then it just means giving a

broader definition to the word "product." But I also have a concern about the earlier stage research projects as well that may not come out with a product per se with the broad definition of product.

MR. ABELSON: Just one comment, if I could. This is back on the issue of clean fuels, the environmentally preferred category and the reference to clean fuels. And Sheryl indicated that perhaps we take that word out and replace it with environmentally preferred fuels. I mean I think the reality is that this Commission fairly soon is going to have to bite the bullet and decide whether or not you're going to, to be fairly concrete, exclude oil and coal, I think those are the ones that are used, or not. Because whether you use those catch phrases doesn't answer the question.

But the issue is, all I'm trying to do is surface the issue so that it's clear that those are the choices that you have to make at some point.

PRESIDING COMMISSIONER ROHY: Right, it is an issue.

MS. CARTER: Yes. And, also, just to add one more thing. You know, we designated the four focus areas, but there are things that are going to fall outside that focus area. Now environmentally preferred advanced generation technologies is one of the focus areas. That doesn't mean that, you know, if we exclude coal and petroleum from that environmentally preferred category, it doesn't mean that those types of projects couldn't potentially be done if they met all of the criteria that we've set up. It just wouldn't be under that focus area.

PRESIDING COMMISSIONER ROHY: Yeah, I have trouble excluding a product by name like coal or petroleum. Whereas, one should set up criteria produces so much CO2 or so much NOx, and that's what should preclude something. Not because it's named coal or named petroleum.

MR. ABELSON: And what I did hear Ms. Carter say in that regard is that whatever you're going to do, the view that she's recommending I guess is to look at the whole fuel cycle in that concern.

PRESIDING COMMISSIONER ROHY: Exactly. I heard her say that.

Thank you very much.

Oh, Tom came up with a question. You just about got away.

MR. TANTON: Almost got away. It's in response to the last comment you made about projects that might fall outside of the four focus areas but that would still be eligible for consideration of funding. And my question goes back to a comment that Mr. DeAngelis made earlier this morning during his presentation that the four focus areas were considered to be the areas for funding emphasis, okay.

Now my question to you, Ms. Carter, is if enough projects, whatever enough might be, of sufficient merit came to the Committee, came to the Commission, that otherwise would fall outside of the four focus areas but resulted in funding emphasis, and I assume the phrase refers to what percentage of the total funds might go to those projects, would that cause you concern if more funds went to projects which somehow fell outside of the four

focus areas in any particular funding cycle? Or is there some sort of funding percentage that is associated with the focus areas?

MS. CARTER: We don't have any type of funding percentages in mind for this at all. I think whether I was concerned or not would definitely depend on what those projects are. So that's kind of a hard answer, or hard question to answer, but I would think that if it was being done at the expense of, and the focus area projects were suffering or, you know being funded, you know, at a very minimal or no zero level, I would definitely be concerned.

Now, of course, if we get no proposals in those areas and none are able to be solicited, you know, but I mean these are all things that we're going to have to take into account, but, yeah, I think in general I would probably be concerned.

MR. TANTON: Okay, so the focus areas would in maybe a different sense be alerting the world that we're particularly interested in these kinds of projects, other projects are also encouraged, but we don't have any specificity for them.

But in terms of the funding breakout there might not be any particular emphasis one way or the other. Within the concerns that you just outlined.

MS. CARTER: Right, right.

MR. TANTON: Okay, good. Thank you.

PRESIDING COMMISSIONER ROHY: Mr. Leibowitz.

MR. LEIBOWITZ: Thank you. Good afternoon. It's nice to be here again.

My comments deal with the focus areas and issues pertaining to big players versus small players.

The four focus areas that were described in the strategic report I think are very well placed. I was very active in the process as a signatory and part of the advisory group, and I think there was a lot of time spent identifying those focus areas that would be most effective in meeting the objectives and mission statement.

And to now include things like system reliability, as amorphous as it is, would be a disservice to the effectiveness of the program.

To the extent that T&D is already funded in the regulated sector to the point that you've been making, Commissioner Sharpless, and to the extent that it is already explicitly mentioned in Section 3 of the strategic report, all areas for real T&D R&D has an opportunity for funding. To then add on top of that a fifth focus area I think just dilutes the other four areas already established. And I think that would be a big mistake.

We've heard things like system reliability, but there hasn't been any examples given. It is accepted and taken for granted that nobody is going to accept a new technology that only works with a 50 percent capacity factor. Things that are not reliable are out of contention to begin with.

So what I am hearing is that people want to erect new poles or cut trees and trim lines with the RD&D program, and I don't think that's appropriate.

Beyond that, to a point that was made by a fellow who works

for a small company, I work for a 20-person company, by talking about large participants, I'm talking about in size, the concern is not that the little player is excluded, it's just the influence that the big player has in the process.

And the example that I gave during the collaborative efforts was that if the big dog and little dog both have access to the trough, clearly the big dog eats first, almost to the exclusion of the little guy.

So it's not, to your point, Commissioner Sharpless, it's not that the little guy doesn't have access. It's that in a race he is just sort of put off on the side. And I think it was important that that be noted. That a lot of the innovation and entrepreneurial skills that we're seeing that will ultimately benefit the California energy consumer is often and mostly provided by the smaller companies and the scientists and engineers as opposed to the very very large companies.

That's all I have to say.

PRESIDING COMMISSIONER ROHY: Thank you, Mr. Leibowitz.

Did I understand your first statement to say that T&D was included in this report in some location?

MR. LEIBOWITZ: In Section 3 it specifically talks about system reliability on page 3.3 in those cross-cutting strategic energy R&D activities.

PRESIDING COMMISSIONER ROHY: Okay, I thought I heard you say it mentioned T&D.

MR. LEIBOWITZ: No, I'm sorry. If I said "T&D," I misspoke. I meant to say system reliability.

PRESIDING COMMISSIONER ROHY: By system related projects, things like that?

MR. LEIBOWITZ: Yes. Well, the word "system reliability" is specifically mentioned on page 3.3.

PRESIDING COMMISSIONER ROHY: Okay, thank you.

COMMISSIONER SHARPLESS: If I could, I just would like to get maybe some ideas about little guy versus big guy. It kind of reminds me of the tortoise and the hare story, you know. And just because you're fast doesn't mean you're going to win the race. It's your persistence.

What, obviously little guys offer a lot. And what is it in a research system that allows little guys to compete? What is it that we can do that allows little guys to compete? Aside from the fact that, you know, keep your contracting process simple and straightforward.

MR. LEIBOWITZ: The straight answer is keep the playing field as level as possible and evaluate the proposals purely on its content.

I can give you an example. I work for a company that has a technology that ten years ago was not very well known. We submitted proposals to the Department of Energy under our company's name and were not accepted. The same proposal went to the Department of Energy in collaboration with a much larger company. That proposal was then accepted.

And I think just the brand name, the affiliation, the GE monogram or the Westinghouse logo and so forth, vis-a-vis the small guy who hasn't got that good will in terms of brand name

affiliation has a significant impact just in the lobbying process.

PRESIDING COMMISSIONER ROHY: I'm sure you're excluding this agency as --

MR. LEIBOWITZ: Of course I am, because 11 years ago we were able to convince this body that our technology was genuine. And you guys stepped up to the plate.

PRESIDING COMMISSIONER ROHY: And I hope we can continue to do that.

MR. LEIBOWITZ: Yeah, me too.

COMMISSIONER SHARPLESS: Thank you.

PRESIDING COMMISSIONER ROHY: I had George Hay up next, but I just saw him leave the room, so let's go on to Ken Broome, and I'll put George in next.

MR. BROOME: Appreciate you allowing me to come a little later in the program.

I would like to comment on the focus groups, and primarily from what is not said, and I see very little reference to economics as a major factor in comparing different alternatives and considering system performance as a whole. And this may be because of jurisdictional matter where economics is the purview of the PUC or the group that's concerned with allocating the 540 million. I don't know.

But it does seem to me that that area is something that can have a profound influence on the mix of different types of generation that are used in the state. And I would echo the previous speaker's reference to the level playing field. I do think that trying to make a transition from a regulated industry

to one that is competitive will require a close look at many of the factors that now are no longer appropriate.

For instance, the fair market price of electricity is a matter that each small developer of renewable energy is faced with, and I think that in order to be fair we should compete with a price structure that includes all the relevant costs. Such as the investment that may have been written off in some cases, or have already been contracted for in another case, so that we have to compete with the marginal costs of operating and maintenance which I don't think is a fair way to have to compete, and I think some research on what that might mean.

I come from 12 years of trying to define avoided costs according to PURPA, and it's been a very very difficult subject, and I think it needs a lot of work, actually, to come up with a fair basis for comparing the prices of different forms of generation. And I think that environmental and other types of externalities should be given far more consideration in a monetary sense.

I know there's been a number of attempts at this, mainly academic; but I think if we can turn the theory into practice and be able to include the undoubtedly critical effect of CO₂ generation, or rather discharge, into the atmosphere at the end of the year, we're going to have to sign the new treaty in Keoto [phonetic]. And if we're not prepared to accept the economic consequences, it's going to be an extraordinarily difficult thing to sell the voters of this country on our compliance of that treaty.

And I think there's a basic inequity between public and private power. I would like to take advantage of that and have public power entities finance my project. That saves like a cent and a half a kilowatt hour if you take the tax free status of their way of raising capital and the much longer period of repayment, it makes that much difference in kilowatt hour prices.

So I'd like to see some studies done on how can we bring together such diverse methods of financing in one market competitive system.

In addition to that I see no reference to storage anywhere in our R&D.

By the way, I have to say I was not able to attend the more recent meetings of the Committee, and I apologize to Mike for not, you know, for making this available earlier in the cycle.

But I think large scale storage projects are a vital part of our system. And I'm not sure how they're going to be financed in the forthcoming system with the independent system operator apparently being able to call on storage either way, and I'm not sure how it's all going to be paid for.

But I would just mention one thing. In Japan they have as much as ten percent of their capacity in storage. We're lucky to have two. You know, there's the same electricity. The economics aren't any different. And I think study needs to be made of the impact of storage project on our California power system.

The other thing is the quality of power which has not been mentioned, but I think the dynamic benefits of storage in providing voltage and frequency control and spending reserves and

all these other good things have been quantified in England to a large degree. In fact they had their big pump storage project tied into the national grid. That was part of the national grid. I think it's not necessarily allocated that way here, but I do believe that that is a major part in the economics of the system and the maintenance of adequate reliability and quality. And I'd like to see an R&D program to decide how much storage we need in the State of California to justify it.

So that basically summarizes my comments. And it may be that we should include economics along with system reliability in a final focus area.

Thank you.

PRESIDING COMMISSIONER ROHY: Excuse me, were you suggesting another focus area, or to include it where?

MR. BROOME: Include it with system reliability I think it really belongs.

PRESIDING COMMISSIONER ROHY: Under strategic energy research?

MR. BROOME: It could be. I think it should be spelled out, though, in the definition of what that covers.

PRESIDING COMMISSIONER ROHY: Many of your comments, I think, are very valuable comments, and we'll use in our next phase of the operational program, part of the program. I noticed also your company was a signator to this document so I assume by that that you agree primarily --

MR. BROOME: I agree with what was in it, but I think it needs a little bit more.

PRESIDING COMMISSIONER ROHY: Thank you.

MR. BROOME: You're welcome.

COMMISSIONER SHARPLESS: I guess I'm still assimilating what you just said. Some of these issues, such as large scale storage and some of the economic issues, are we looking at developing models? Is that what you would see as the research part of a proposal?

MR. BROOME: It could be. I know in the PJM system they do model their storage system as part of the overall system management tool.

And I imagine, I really don't have firsthand knowledge of the situation here, but I presume that PG&E has their own system operating model including their Helms pump storage project and whatever other storage there may be. But there may well be justification for a totally fresh look at that since we're now talking about a statewide system.

COMMISSIONER SHARPLESS: Okay. Thank you.

MR. BROOME: Thank you.

PRESIDING COMMISSIONER ROHY: Thank you very much.

MR. BROOME: You're welcome.

PRESIDING COMMISSIONER ROHY: Mr. George Hay.

MR. DeANGELIS: Could I just make a brief comment?

PRESIDING COMMISSIONER ROHY: I'm sorry. Yes.

MR. DeANGELIS: I just wanted to clarify that I don't believe there's anything in the plan that excludes storage, although it is not called out directly. Certainly it could, if it is a part of any of the focus areas, it could be included within

those focus areas. If it's a part of a renewable energy system or an environmentally preferred generation. And also it certainly could fit within a strategic energy research also.

Regarding the comment on economics, I think there was great pains in this report from the advisory group to include non-technology types of research, which is where I think that would fit. And in fact, in my presentation I did mention that even in the focus areas there was one objective cited for analytic and information-type of research.

So I just wanted to clarify that in terms of what I see in the plan.

PRESIDING COMMISSIONER ROHY: Mr. Hay.

MR. HAY: Thank you. I'm George Hay of CAGT, LLC in Lafayette, California. CAGT, LLC manages the Collaborative Advanced Gas Turbine Program whose thrust to research development and demonstration in the areas of clean alternatives to replacing the aging 20,000 megawatts of cycling utility steam plants in California, distributed high efficiency gas fired generation and renewable gas hybrid options are the three focus areas of CAGT.

CAGT has been a participant of the working group and commends the CEC Staff and other members of the ad hoc advisory committee for cooperating in the preparation of a strategic plan that provides a sound platform for detailed planning and implementation of the public interest RD&D program established by AB 1890.

In particular, we support the inclusion of environmentally preferred advanced generation research focus area which we believe offers substantial potential public benefits in the form of

increased availability of clean, efficient, flexible sources of electric energy that lower the cost and increase the value to California electric consumers.

The strategic plan provides an appropriate balance between public input and program flexibility. We encourage the CEC to maintain its open process in developing the RD&D program. The strategic plan outlines a number of topics and issues to be addressed in the operational plan.

CAGT, LLC was happy to be a participant in the advisory group and would like to continue to support the CEC process in whatever manner we can to develop an operational plan for implementing the public interest RD&D program.

The hearing notice required input on actions necessary for implementing the most successful implementation of the public interest RD&D. We'd recommend that the RD&D program be structured to encourage creativity and innovative project proposals by avoiding establishing a rigid a detailed program structure or budget breakdown.

The program structure and funding allocation should be the outcome of a review of RD&D proposals rather than setting structure and funding allocations in some way that predetermines research proposals and technical program content.

This would be facilitated by establishing evaluation criteria that focus on assessing the quality of a research proposal rather than gauging its fit to a predetermined vision of the research program.

As a final note, CAGT LLC would thank the CEC for being a

participant in the March advanced generation turbine workshop that included the Department of Energy, EPRI, GRI, the Gas Turbine Association and CAGT. The forum would an extremely valuable one for getting the various research communities together to look at gas turbine research in a very dramatically changing environment. We had folks from all over the world there.

Would like to suggest that the proceedings of that workshop be included as an input into the RD&D priorities and proposal evaluations. It was extremely valuable workshop, and I think the Energy Commission should be commended, particularly David Hatfield for his efforts in that workshop.

Thank you very much.

PRESIDING COMMISSIONER ROHY: Thank you, George. I just have to say that we're not accepting proposals at this time, but we will accept it as background information.

MR. HAY: Well, input is the key word there.

PRESIDING COMMISSIONER ROHY: There you go. I have one concern that I noted in the working group's document and you brought up, so since you brought it up I might as well ask the question. And you said don't allocate money by focus area, specifically, or generally, you said that. And I believe you said base it on the quality of the proposals, a number of proposals you get in each area.

I believe, and this is a belief at this time, that we will not release one gigantic RFP to spend all 62 million in one year at one time.

Just from an administrative backlog point of view it may just

stop the entire process. We may, in fact, have several RFPs during the year. Therefore, my concern is if we start picking all the good proposals on focus group A, B and C, and we get down to D and have no money left, how will this work?

MR. HAY: That sounds like a bigger question than one for me.

PRESIDING COMMISSIONER ROHY: But you had advocated that we don't allocate money by group, and if we sequentially go through these in some manner, I don't say that we would do a --

MR. HAY: I think the issue is really one of in watching the renewable program and pool of funds get categorized into smaller and smaller boxes, essentially that tends to predetermine outcomes before you've really seen necessarily what the proposals may be. And I guess it's avoiding that tendency.

Obviously, you need to set criteria for different programs, but ultimately you may end up with subject matters that cut across a number of different areas. Distributed gen, renewable energy, system reliability, you can store energy in the gas system, so there are a lot of creative solutions on energy storage in the gas system.

You name it, there's a lot of different things that may cut across, and if criteria, and particularly pools of funds are predetermined, that predetermines outcomes. So maybe perhaps set the criteria by areas, but things that may cut across, allow things to be included but to that effect.

PRESIDING COMMISSIONER ROHY: I think I hear you and what other folks have said is stay a little bit flexible as you go

through the program.

MR. HAY: Much more concisely than what I said.

PRESIDING COMMISSIONER ROHY: Thank you very much, George.

MR. HAY: Thank you.

PRESIDING COMMISSIONER ROHY: Oh, I'm sorry, Dave Abelson had a comment.

MR. ABELSON: Commissioner, just one comment on the record on that last point.

One of the things that the PUC has done in the last few years, and it's just something to throw out in response to your observations and to George's as well, is that they used to have something that they called balancing accounts within RD&D budgets. And although something might get established at the time of the original allocation, the utilities were given a certain considerable amount of flexibility to move from one category to the other. It wasn't unlimited, and it was contingent on how things evolve.

So there may be a way to set some rough parameters at the beginning of the program while still building in the flexibility to, I think George and you both were indicating is essential, for merit base selection. That's going to be our challenge to do.

PRESIDING COMMISSIONER ROHY: Thank you. Good answer. Thank you, George.

Dave Modisette representing University of California.

MR. MODISETTE: Commissioner Rohy, Commissioner Sharpless, and distinguished advisors, I'm Dave Modisette, and I'm here today

representing the University of California. I'm actually here in the place of Carl Blumstein who had to attend to some family medical issues today.

So let me just caveat my presentation with a qualification that the university is going to file some written comments, probably electronically, by five o'clock today, and I'd encourage you to look at those because Carl is, not only has more background and experience in this area than I do, but he's also much more articulate.

I have five comments today. The first one is to endorse the strategic plan. Let me identify the others, and then I'll go through them. I'd like to comment on the focus areas. Thirdly on the selection guidelines. Fourthly on the connection to the market. And then maybe lastly just a brief comment on the so-called administrative streamline or contract streamline issues.

First of all, we do endorse the strategic plan. Our name is on the document, and I guess with that I want to join the other stakeholders in complimenting the Staff on a very difficult job extremely well done.

Let me comment then on the focus areas. The university does support the four focus areas described in objective one. We believe that these areas have specifically been under invested in because of the nature of the old regulatory environment, and that there are many fruitful research avenues to pursue in them for public interest research.

But we are concerned that some might interpret these focus areas to be exclusive. We do not think research outside the focus

areas should be eliminated or have to be justified by Herculean standards. Some of the most innovative and beneficial research comes from the cracks between areas or from multi-disciplinary approaches. The university supports quality RD&D in any area that is consistent with ERC's mission.

Let me move on to the selection guidelines. And I guess the issue here is just to emphasize that these are guidelines, and I think the Staff and the Commission needs to be particularly careful as they translate those guidelines into specific project selection criteria.

And I guess I mean that in two ways. I think they need to be careful as these things are translated into the legislative criteria, the administration and the expenditure criteria. They also need to be careful as these are translated into criteria for the implementation plans and for whatever implementation mechanisms are eventually developed.

The way this issue actually came up is as I was flipping through the legislation I notice there is a section on project selection criteria which does contain much of the, you know, much of the information in the guidelines. But I guess I was particularly concerned by the last one that's mentioned which is on page five toward the top of the page, subsection N, the extent of the applicant's financial participation.

And I guess if I'm reading this correctly what I think that this means is that if an applicant has more money to put on the table, then, of course, their proposal gets a higher grade.

And my concern about that is I think that is an appropriate

criteria for some types of RD&D but not all types of RD&D. It's particularly appropriate, I think, as we do talk about connectivity to the market, particularly in the later stages of RD&D, commercialization; but I think if you include it as a blanket statement in the way it's included here, that what you're going to find is you're going to have a bias in the project selection towards those later stages of RD&D, and you won't get the kind of balance which is in the mission and which we've talked about today where you have some mid term and some longer term projects as well.

I also think another impact of this will be to bias the program away from many of the institutions which are, of course, doing public interest RD&D in the state and have for many years. Namely, the public sector institutions such as universities and colleges, national laboratories, also private institutions such as private colleges and nonprofit research organizations.

So I think that again we need to be careful in translating that criteria, and I guess specifically in this case we would either like to see it qualified in some way or perhaps eliminated from the legislation. And the reason that I think I can recommend the elimination is because the way the legislation is set up is that the Commission can always add criteria, and you can add more specific criteria, but you can't subtract anything that's on this list.

Let's see, quickly on the connection to the market, this is the area, of course, where there's three separate criteria which have been provided to the Committee for their selection. I guess

I was a little concerned to see just one of those criteria in the draft legislation particularly because I guess my recollection of the last R&D Committee hearing where this issue was discussed is that there was tremendous support for Option 4(c).

Now in the last day or so as I've talked to other stakeholders about this issue I've realized that there is just a tremendous amount of confusion and misunderstanding about what the words in the three options mean. I mean it's difficult to distinguish between the three options. So I think what that has done is that's caused a number of the stakeholders to say, well, you know, what difference does it make.

But I don't know, as a person that tried to look at those three criteria with fresh eyes, I guess my take on them is that the concern, our concern, over Option 4(a) was that there seemed to be a tremendous amount of emphasis put on assessment of market needs.

And this is an area, having been an R&D research manager, actually in this institution, for many years, this is an area which can just absorb a tremendous amount of time and effort. And I think the fear was that all of a sudden a large portion of the funds that we have available would all of a sudden get pushed into paper studies and paper assessments of what the market really needs.

As opposed to what I think people were trying to do in Option 4(c), which is to say let's apply this question of connectivity to the market to the individual projects, let's try to find opportunities within those individual projects to use technology

transfer and build upon the specific qualities of the project to get that connectivity to the market.

I actually think that (C) provides a much larger pallet of tools for the Commission to have that connectivity to the market, including partnerships with the private sector which are specifically mentioned, collaboration with private stakeholders that are specifically mentioned. So again it just seemed to me, for what it's worth, that (C) gave you a much fuller pallet of tools, some more specifics and avoided, I think, the impression that a lot of the money would just be consumed by paper studies.

Lastly on contract streamlining, and this is another area where I do want to commend the Staff, the work that they have done, both in the legislation, and I know internally here at the Commission, to try to streamline the contracting and administrative process for RD&D is really commendable. In fact, that's, I think, the real strength of this legislation, and one of the things which I think all the stakeholders should take to heart and support as this moves through the legislative process.

And just maybe a very general comment, you know, procuring technology development is unique. It's unlike any other kind of procurement that the State of California does. We're not, you know, buying pencils or cement or other things like that, and it's very difficult to take the state's traditional contract process and try to impose that on an RD&D environment.

I know the Commission's been struggling with that for years, and I'm hopeful that this legislation will give it the flexibility it really needs. So I commend Staff for their work in this area.

Thank you.

PRESIDING COMMISSIONER ROHY: Thank you for your very thoughtful comments. And I don't have questions. Do you, Commissioner?

COMMISSIONER SHARPLESS: Yes, I'd like to go back to the 4(A), (B) and (C) again. I think Mr. Modisette helped in some ways to pick his preference. But I'm not sure, and I guess I would go back to a point that you made that the words are confusing. And perhaps somebody can tell me why we have three options in number four rather than one option in number four, and what the looming issue was that broke it up into three options versus one. What is the difficulty here?

MR. DeANGELIS: I'll do my best to try to remember the meetings that we had and what transpired here. I think that what really happened was that we just couldn't agree on the words. We agreed with the concept.

COMMISSIONER SHARPLESS: But what is the difficulty that we're trying to solve with number four? What is the issue?

MR. DeANGELIS: How we state market connectedness. And I think --

COMMISSIONER SHARPLESS: And can you break it down further? Is this the issue of commercialization?

MR. DeANGELIS: Let me give you -- no. Let me give you the overview. I think that what really ended up happening is that there was so much work to be done that we didn't come back and focus on trying to resolve this because there is other more important things to be done. So we left it as three options.

And sometimes in these meetings it gets a little emotional because some people write different options, and it gets difficult for them to step back away from them. And we never did go back to try to revisit this. We were working on a deadline to have recommendations on the administration and expenditure criteria in February, so it's been a number of months since we've really even visited this issue at all.

So I think it's primarily in words. I think everyone agrees to the connectedness to the market, and it's how you state it. And I think what Dave Modisette said about (A) is interesting input; 4(A) is probably the most terse statement of it.

I think 4(C) is stated a little bit longer. As I recall, I think I know I heard comments on 4(C) that it however may be redundant and overlap some of the other objectives. And 4(B) I can't recall. To be honest I haven't spent a lot of time with these options.

COMMISSIONER SHARPLESS: Well, could I ask you if there's some issues within the connectedness to the market? Does this get to the issue of whether you do more applied than basic?

MR. DeANGELIS: No.

COMMISSIONER SHARPLESS: Does this get to the issue of to what degree do you get involved in commercialization?

MR. ABELSON: I think, Commissioner, there is an element of that, although it's hard to know from the precise words in the option. We actually attempted in the report on page 2-5 at the bottom of the report, page 2-5, there's a paragraph that begins with the word "finally," and it extends over to page 2-6. And

it's a very short attempt, which the group apparently didn't have any difficulty with in terms of the description of the problem, that there was no controversy about this paragraph, and it was reviewed several times.

Basically I think the group recognizes the need for connection to the market. There doesn't seem to be much resistance to that problem that was described in our committee hearing early on as the Valley of Death. And so you do work to a certain point. You never do any connection to the market, and it sits on the shelf and dies.

On the other hand, there are many participants in the group who are very aware of the limited nature of these funds and that commercialization efforts in one form or another can be costly, are perhaps better funded in other sectors or out of other pots of money, and they very much do not want, for example, assessments I think is the example Dave Modisette just used, to sump up a disproportionate amount of the limited research and development dollars that you have.

And I think that in that tension between being connected to the market on the one hand and not being so connected that you disproportionately sump up the funds, the parties just couldn't quite get it to consensus on the words to reflect that.

And all three of these options, frankly, are different people's attempts to try to phrase that balance. And I think in the end it may be the Committee's challenge to take some combination of the words, or maybe even new words, of its own if it's sensitive to what the dynamic tension issue is.

COMMISSIONER SHARPLESS: Well, I certainly hope that whatever words we choose will mean something to those who read it. Because if we're having a hard time unwinding A, B and C, the difference between them and the implications and the impact, then it's going to be very difficult to know what we're trying to accomplish here.

And I note that Dave is a master at sorting through these issues, but before you sort through them I guess you kind of have to know what the issue is; right? And that's what I was trying to figure out.

MR. ABELSON: That's it. It's that balance between too little and too much.

PRESIDING COMMISSIONER ROHY: I was going to ask a question here, and maybe Mr. Modisette could answer it from UC's point of view, is I see market connectedness different from commercialization. And when I look at that, let me explain it and see if it fits what you're thinking about.

I don't believe this program will do what the University of California traditionally believes is truly basic research. You know, particle physics and things of that nature. But it may be very much on the research end. It has to be connected to some real world problem that's perceived, but it doesn't have to take it through the commercialization stage.

That's what I consider market connectedness but not necessarily commercialization. Does that match? Could you speak to that?

MR. MODISETTE: I believe I understand the way you've

characterized it. And maybe I should first say that, you know, that the university believes that it does not only do basic research. In fact, I think it likes to think of itself as doing applied research. And in some of the work that it's done recently that I'm particularly familiar with you have a situation where I think the university has really transitioned the work all the way from, well, I don't know, perhaps the basic research stage, and I will give you an example of this, to all the way to the market.

I'm thinking of a project which the university started several years ago to look at duct work, losses in duct work. And the first step of that was just to say, well, gosh, you know, what is the energy use in duct work, and actually do some measurement of duct work which surprisingly in our computer programs and other things just made assumptions on, and we found, of course much to our amazement, that the losses in duct work, both heating and cooling, are tremendous. They're very very high. Thirty percent or more.

PRESIDING COMMISSIONER ROHY: I can stop you right there. That was a market assessment of some type, a need.

MR. MODISETTE: Oh, yes.

PRESIDING COMMISSIONER ROHY: And established a connectedness.

MR. MODISETTE: Yes. No, that's absolutely right. No, I would agree with that certainly. And then I think what, but I guess my point is that although the university asked for private sector funding and other funding for that activity, there were no takers whatsoever. You know, we had to scramble around for public

sector funding to be able to do that.

Now that the university has taken the research to the point where it can be commercialized in the marketplace, there are people that are interested. And, in fact, the university actually has some private sector partners now that are trying to develop the tools so that contractors and other people can use this on a regular basis.

PRESIDING COMMISSIONER ROHY: Comments?

Thank you very much.

We have three more blue cards, for those who are watching the clock here, for the day, and then I believe Commissioner Sharpless and I have a few more questions after this.

John Guardalabene representing PG&E.

MR. GUARDALABENE: Thank you, Commissioner Rohy. Good afternoon, everyone. I have a very limited procedural issue that I'd like to address, but one that I think could have some significant ramifications down the line.

The Staff has asked for a turnaround time of basically one day on comments to propose legislation. This is an extremely short period of time. At PG&E we take legislative review very seriously, and it often involved discussions among numerous people. Consequently, I can't commit that we will be able to do an adequate analysis and provide comments by close of business tomorrow.

To the extent that we are not able to meet that deadline, or in fact, to the extent we don't respond at all, which is not going to be the case, I would ask you not to assume that silence means

consent or support. There have been some 70 interested parties involved in this process, and I think the same should reasonably apply to everyone else. That if you don't hear from them, that does not necessarily mean that they've signed on to the proposed legislation.

That's it.

PRESIDING COMMISSIONER ROHY: I appreciate that comment and admonition.

MR. GUARDALABENE: Thank you.

COMMISSIONER SHARPLESS: I'd just make one comment. It's kind of unusual for an organization to have comment on a legislative proposal, such as ours, but recognizing that there has been a collaborative, and Drake is looking frowning, in drafting legislation we do not usually put "shop it out." But this is an unusual circumstance where the legislation is, in fact, growing out of a collaborative effort, but it is, in fact, it will, in fact, be Commission language.

MR. GUARDALABENE: I understand that, and that's what provoked my comments here.

COMMISSIONER SHARPLESS: Yeah, and so this is an opportunity.

MR. GUARDALABENE: I understand that.

COMMISSIONER SHARPLESS: And I think that the Commission recognizes that this is a very short time frame. We would like to give more time, but we, in fact, ourselves don't have more time to give. So we're all against the wall.

So I take your comments to what they were intended to do, and

that is, you know, that you may or may not be able to give us the full scope.

However, I would remind you that since you've been involved in the collaborative process, it's not as though that you're eating a new meal. You're actually digesting this one.

MR. GUARDALABENE: The point's well taken.

COMMISSIONER SHARPLESS: Sorry for the analogy.

MR. GUARDALABENE: But you know where we were at lunch time.

I think it's because we are dealing with legislation here. I understand the circumstances that have led to the development of the legislation, but legislation is a very different, how shall I say, governmental animal from almost any other kind of governmental statement.

So notwithstanding the fact that there was a collaborative engagement for the development of the report, one looks at legislation very differently, or at least I do, from any other kind of written document. It has implications, and it has also has some difficulties associated with changing it that other documents don't have. And for that reason I think there is something of a distinction here, but I've made my point and appreciate the opportunity.

PRESIDING COMMISSIONER ROHY: If we do not have comments tomorrow and you have them later, we will certainly receive them gratefully.

MR. GUARDALABENE: Thank you.

PRESIDING COMMISSIONER ROHY: Mr. Kurt Kammerer, San

Diego Gas and Electric.

MR. KAMMERER: Good afternoon, Commissioners, CEC Staff and colleagues. My name is Kurt Kammerer. I'm Manager of Research and development at San Diego Gas and Electric.

We did not file formal comments today, but I felt compelled to address some of the issues that were brought up by my colleagues and maybe amplify to make some clarifications to some of the points that were discussed. I hope I clarify and not add to the vagueness of the issues.

The first is with respect to reliability research in general. Just like environmental and renewables and energy efficiency research have some macro system-type focus and some micro end-use-type focus, reliability issues can be addressed both within the regulated utility or in the macro system integration sense. And I think those are the issues that we're trying to dealing with it at this point.

An example would be regulated research into new materials for insulators in the transmission system to prevent flash overs is a good regulated reliability research that's been funded and should and will continue to be funded within regulated research programs. But the new issues of, there's a lot of new and continuing issues with respect to the system overall dynamic reliability of the system.

For instance, open retail access and the opening up the generation system to competitive influences will create more of a distributed supply system. That creates a lot of very specific problems to the distribution and transmission system. Such as

dynamic line stability, sub resonance and increased line open circuit currents ratings that some technologies, like fax devices and others like that, research should be done in those areas.

And I'd like to offer an analogy that might help clarify the situation. When the telecommunications industry was deregulated ten years ago, before that if you picked up your phone and it didn't work, you called AT&T because they own the phone, the lines in your home, the wires, they didn't have satellites then, but all the long distance transmission the central offices.

Well, the same thing is happening now that the utilities don't own the phones. It's not clear that we're going to own the meters any longer. We may not own the generation plants. And there's a lot of issues with respect to that that are up and coming, and I think a lot of us are beginning to realize are somewhat new reliability issues.

I guess the second point I wanted to clarify, with respect to the \$700,000 in public interest T&D, that, in fact, was, if you look at where those numbers were taken, there was a data request prior to the February 5 decision, and I forget when it was, it was back in November or December. The \$700,000 was, in fact, the monies that was spent in the regulated entities for EMF. At least that's what San Diego Gas and Electric provided.

There was more public interest funds that were, or public interest spending, that were delineated in that data request. And I think the total number for all the utilities was between 12 and \$15 million. And the assumption when we develop those numbers, the definition of public interest research was that which was not

provided by the regulated or competitive markets. And the assumptions were that those monies would be around, that 10 to \$15 million and the remaining dollars that were collected in rates, were going to fund much of the remaining research.

And as we all know, and I think we're struggling with, that is not the case any longer. That, in fact, the surcharge was not above and beyond those monies, and it's coming from that same pot of funds.

And I just wanted to clarify that. That was my understanding of the \$700,000. That, in fact, it was never meant to be given to the utilities. We are identifying that as a public interest issue at the point that the CEC should consider. So I support Edison's recommendation to consider that under the CEC programs EMF research.

And the last is block grants. We support EPRI in their encouraging you as well as CURC and our other utilities. Much of the work that's being done now by the utilities through collaborative partnerships like EPRI I think would serve the state well and has been serving the state well, and I think should not be shut out and encouraged.

And I hate to think that it's a big player versus little player issue. In fact, you may consider us a big player, but much of our research dollars are, in fact, allocated to subcontractors that are small private companies throughout the State of California. And I think what the utilities bring to collaborate that research with among ourselves is helpful. And I hope this is not a "us" versus "them" issue.

That's all my comments. Thank you.

PRESIDING COMMISSIONER ROHY: Thank you.

Comments?

You got off easy. We must be getting tired.

Our last witness is Rich Ferguson represent CEERT. Our last blue card. There may be other folks who wish to speak.

MR. FERGUSON: Yes, Commissioners, my boss, John White, sent me over today on behalf of my Center For Energy Efficiency and Renewable Technologies' hat to support the strategic plan. I have not yet seen the draft legislation. Will take a look at that tomorrow.

I'm probably one of the only ones that you've heard from today who was in on the very initial discussions about the public goods funds with the consumer groups that started almost three years ago now when we first started talking about these issues. And I think the history behind how this fund happened to end up in AB 1890 is instructive, so I thought it might be useful to tell you a little bit about that.

When the whole idea of restructuring came up, we said from the environmental point of view we would like everybody to agree on a sort of "do no harm" principle. And that the funding for the various programs, energy efficiency, renewables and public interest RD&D, should be kept at something like the levels that they were in 1994 before everybody started maneuvering and jockeying for a position.

When asked, well, what does that mean, we started to look at the energy efficiency budgets; we looked at the BRPU costs; we

looked at, you know, what we counted as public interest R&D in the utility systems. As a result of that we came up with dollars and came up with an overall figure. That figure ended up in the MOU, it ended up in AB 1123, and eventually ended up in 1890.

One of the criteria from the very beginning, the consumer groups and the environmental groups, I think, all agreed upon was that this fund should, this money should be spent in the public interest which means the results of the use of this money should remain in the public domain. And more than that, that the funds should all be administered in a competitive manner.

Now this has led to considerable argument, both on the energy efficiency funds, you've been through the renewable argument about how to administer that program competitively, and this is the third one. So when the PUC sent out their data request and tried to make their decision about what did the legislature mean, that's what they were trying to get at I think. And I think they got it right.

This particular fund, there was a gang of us with the peace gun to our heads sitting in the back room at IEP arguing about this amount of money. We had very limited time, like 15 minutes, to finally decide what's going in the bill, and we finally agreed on this number.

At that time there was already disagreement, as Mike remembers well, about whether or not a piece of this was to be set aside for administration by the utilities. There was absolutely no agreement on that. We said, no way. This is public goods money, and it needs to be independently administered. So that was

not resolved either in the back room nor in the legislation. We feel very strongly that it should be competitively administered, the results should remain in the public domain and so forth.

After the weekend when the tie line went down, we all know that on Monday there were at least 12 references to reliability that all of a sudden appeared in the legislation, and so that was latched onto as, well, okay, the utilities will do the reliability research, whatever that is. But again, it was not resolved.

And sort of looking and see how the other issues of administration, you know, came down, I think the energy efficiency analogue is the right one. That in a competitive world if, you know, the investment by an individual company should be that company's responsibility and the benefits accrue to that company and its stockholders, but what is spent on the public interest has to remain in the public domain.

And, you know, we feel that both the PUC in its decision on the \$700,000 and this report got it right, and it's consistent with what the consumer and environmental stakeholders intended for this money and intended this to be handled from the very beginning.

We don't like the idea of block grants where somehow basically an amount of money is moved over for somebody else to administer. Whether that's EPRI or a utility or anybody else, we think that it should stay here, and that so far looks like you guys are getting it right. So that's really all I had to say about the history of this.

As far as the report goes, it was funny, if I had to choose

one of those three options, I had chosen B.

[Laughter]

MR. FERGUSON: But there is a funny line, and I think maybe it's on the last speaker to close with the line on page 3-5, the last sentence of the last paragraph it says, this is in end use energy efficiency focus area and objectives, it says, "An example of energy conservation would be RD&D activities that reduce the indoor temperature of a building in winter."

And I read that about three times to make sure that's really what it said, and I thought, well, you know, does this mean, you know, how we can open windows more effectively, or --? Anyway, it's a funny line. I don't know if that's what you really meant by that sentence, Mike, or not.

PRESIDING COMMISSIONER ROHY: Rich, I commented on my copy here as that research has been done already.

MR. FERGUSON: Yes, I thought so, too.

PRESIDING COMMISSIONER ROHY: We can declare success there. You can also turn the thermostat down.

MR. FERGUSON: That's right.

PRESIDING COMMISSIONER ROHY: May I ask you a question?

MR. FERGUSON: Yes.

PRESIDING COMMISSIONER ROHY: It's a serious question, and it's something that's troubling me, and I don't have a position on, but you brought it up so it's a good time to focus in on it.

You made the statement that results of the program should remain in the public domain. In fact, you said that several

times. We had earlier folks talk about intellectual property rights. I believe that all the work should be reported out, but I have some problems, and I hope you can help me get through them here.

Is when I worked in industry if something was developed in the public domain and the public had ownership, therefore anyone could use it, nobody would touch it and take it to market because it wasn't a proprietary feature that they could put into their product.

And so I'm troubled with the fact, and the second feature is nobody will cost share a program if they can't get some intellectual property rights on it. So by saying that they should remain in the public domain, and I started at that position by the way, and so I can go either way, you're condemning us to no cost sharing and possibly no market, none of these products or innovations getting into the marketplace. How would you respond to that, because I need help.

MR. FERGUSON: I don't know. I mean, it is a conundrum as we see in the papers about the funding, you know, on the research on the generic thyroid drugs. I mean, this is an issue that needs to be resolved. And I don't have a simple answer for that.

But I think, you know, there is going to be a scale, I think, and I think the fear that I had, and with what I sort of was thinking about when I made that comment, is, I mean, first of all, that there are multiple people who, for example, on the system reliability, and I don't know what that means, but maybe new

generator trip switches or something when there's system failure that shuts them down, I don't know what it is.

But I mean somehow I have a real problem using this particular fund of money to fund some research that would let one utility protect their generators but which would not let other people handle it.

And I mean, I just wonder, and you know better than I, how the universities handle this problem in terms of licensing and so on, and that's more the solution that I was looking for, whereby basically you can try and control means to handle this problem but keep as much ownership as you possible can in the public domain because it is the public that's paying the money.

So I don't have the answer to, but it's a good question.

PRESIDING COMMISSIONER ROHY: So are you agreeing that it's a difficult issue right here?

MR. FERGUSON: It is, no doubt. But I think it argues against having, you know, having a hunk of this money administered by a single company in a block grant-type situation where, as far as I can see, then you would lose all control. I mean I would like to see the administration stay here with the Commission.

MR. TANTON: Rich, when you refer to administration, that term generally includes, or very often includes, a lot of different concepts. Sort of the writing the checks and processing the paperwork all the way through program design and other program sort of activities.

When you're using the term right now to sort of argue against block grants and other institution administrations, what sense of

the term "administration" are you using?

MR. FERGUSON: Again, what I was thinking of right then were things like, you know, what the output of the project is going to be and who is going to control it.

MR. TANTON: Program design criteria kind of stuff and property rights.

MR. FERGUSON: The overall criteria, judging proposals against those criteria, but, I mean, it's like in our organization, we administered a grant for the Hewlett Foundation and one of the conditions is what kind of report it's going to be and who's going to hold the copyright.

And that's part of the administrative function to make those decisions, or at least to be the one who's in charge of negotiating the decision. But those are decisions that have to stay here.

MR. TANTON: Okay.

MR. FERGUSON: And you know, you can hire contractors and take proposals, but the major policy stuff needs to stay here.

MR. TANTON: Okay.

PRESIDING COMMISSIONER ROHY: Thank you.
Commissioner?

Thank you very much.

Are there any other people who wish to make comment on the public plan? Please come forward.

MR. SHERMAN: My name is Max Sherman. I work for the Lawrence Berkeley National Laboratory. I wanted to address a few of the questions which I think I heard the Committee ask during

the course of the day, and at least throw my two cents in.

One is the issue of the Option 4(A), (B) and (C). Without going into the words, it was my sense that, as a member of the advisory group, that the issues that were being discussed were twofold. One of them was the issue of commercialization and how much should be done and where the priorities are.

For example, for (C), which is the one I favor, suggests that commercialization's appropriate as a way of transferring the results that ERC itself produces, and that maybe there's a role for spending some money there, but also suggests that using other people's results and overcoming the so-called Valley of Death wasn't necessarily what this fund was really all about.

Now we find at the laboratory the Valley of Death is not always there. That it's a perception rather than a reality. And this goes back to the issue of the advisory board has to make those decisions.

The second part of four was the difference between market driven and non-market driven, which is not the same thing as being connected to the market. And I think, Commissioner Rohy, you said it well, the example of ducts needs assessment was done to determine whether or not that was a good idea. But if a market assessment was done, as a matter of fact it was done in the course of that, and everybody said, oh, there's no market for anything here because there's no problem. So the market players found no need.

And so a market assessment would have found nothing, but the analysis to do a needs assessment determined that it was at least

worthy of taking the next step. And then there were five or six phases of that kind of work that goes through.

So those are the two issues that are embedded in the objective four issue without going into the rather abstruse word smithing that went on.

Another point is you asked how many people are good for an advisory board. In my experience if the advisory board has more than a couple of dozen people, it's no longer an advisory board. It can have a hundred people, but then it's an assembly, and then it's voting in blocks and advocates and that sort of thing.

However, if you're going to have one that works, it's very important that whoever's selecting them, that select these people in order to have a broad view, they have to be able to address all the many policy constraints and conditions that that board has to do. If they have a narrow viewpoint, then you will get no advice at all. You'll get a breakdown in the board.

So the most fundamental property is a broad perspective. They can also have a personal perspective, they can come from certain industries, whatever, but if they have the broad perspective first, you can make an advisory board of 20 people work. And I think it has to work because for ERC to work that board is going to have to make tough decisions.

For example, in the intellectual property issue, public domain doesn't always work for exactly the reasons that we heard. So you have to decide when is it appropriate to license something, to have a patent, to give somebody the rights, and when is it not.

And there's no way you can do that a priori, there's no way

you can set down rules that can be followed. A value judgment will have to be made on the merits at the time, and you have to have people who do the value judgment, and you have to have people who watch what they do to assure that the interests of the state are being done. And I think that's one of the roles that this high level board would do.

And we concur with, or I concur with what EPRI said in that intellectual property is probably one of the key things that has to be worked out early. Any time two behemoths start talking about contracting, intellectual property can cause the whole thing to grind. Because they both have their ways of doing it, the lawyers on both sides want to grab as much as they can, but the interest of the state should come first.

And I would encourage you to consider some intellectual property requirements in the legislation so that there is no way that the behemoths can argue about it; it will be the law. And that will make things a lot easier down the road.

Finally, I would also suggest that you don't allocate money by focus areas. Because if you do, you will miss the things that are in the cracks, and no one focus group will pick them up. But if they are really important, you want to be able to look at everything at the same time.

Now I don't think it's the right idea to have \$60 million worth of open solicitation. At least not once you reach a steady state. Because you want to be able to sole source some of your money to the winners of last year so that you can follow up the good ones, and so you wouldn't put those in your solicitation.

Over the period of time the amount of money that you would put in open solicitations would reduce down to some fraction of the total, maybe a quarter or a fifth of the money, and the rest of it would go to backing your winners. And again, to determine winners requires that you have a board that can make value judgment. You won't be able to do that with checklists and criteria. You'll have to make value judgment.

So those are my comments.

PRESIDING COMMISSIONER ROHY: Thank you very much. You talked about perhaps putting individual property right language in the legislation. Do you have any suggestions for the language that you could provide, not at the moment, but at some near term?

MR. SHERMAN: We could probably work up something. We could do that.

PRESIDING COMMISSIONER ROHY: I'd appreciate your, any thoughts you have on that.

Commissioner?

Thank you very much. Any other comments? Worn you out.

COMMISSIONER SHARPLESS: No, no, no.

PRESIDING COMMISSIONER ROHY: No, no, we've worn them out.

COMMISSIONER SHARPLESS: Oh, worn them out, oh, yes.

PRESIDING COMMISSIONER ROHY: I do appreciate all the comments we've received to date from the working groups. It gives the Committee and other Commissioners that were here today the perspective from individuals, and the richness and depth that's not always in the final product, so that we get more of a

three-dimensional view of it, if you can say that about a document.

And I've certainly learned a lot. I think probably both Jan and I have some additional questions, but very minor ones.

COMMISSIONER SHARPLESS: Dave, I think that by going witness by witness I've pretty much --

PRESIDING COMMISSIONER ROHY: I'm just checking to see if I have any.

COMMISSIONER SHARPLESS: I don't know that I've got answers to all of the questions I have, but I think I've got as much information as the people here can provide me.

PRESIDING COMMISSIONER ROHY: I was wondering if there is any way we could change that example about reducing indoor temperatures in the winter. That one is --

COMMISSIONER SHARPLESS: You're talking about specifically in the report.

PRESIDING COMMISSIONER ROHY: Right.

I think we have hit just about every comment here. The only very minor comment when you're talking about policy advisory and review committees on page 4.6, Mike DeAngelis, maybe you could answer this, you say this should be a permanent committee. Permanent is a word that is a lightning rod in some categories.

MR. DeANGELIS: Well, I believe the idea behind that, if I remember correctly, was that there is potential for an ad hoc committee.

PRESIDING COMMISSIONER ROHY: Could you call it a standing committee or a sitting committee?

MR. DeANGELIS: Yeah, that may be a better way of stating it. But the idea was that this was not an ad hoc committee that would meet upon need. That it would be an established committee that would exist.

PRESIDING COMMISSIONER ROHY: Thought that's what you meant.

MR. DeANGELIS: Yes, for the life of the --.

PRESIDING COMMISSIONER ROHY: But as we go forward --

MR. DeANGELIS: It wasn't meant to mean that it could not change with the times and have new members and that sort of thing, I don't believe.

PRESIDING COMMISSIONER ROHY: And I guess another minor point is in your selection criteria I don't see reference to existing state law, and we probably would have to say that we would have to obey state law, the proposals would. Specifically with minority, women, disabled type allocations.

MR. DeANGELIS: Yes, I think that, yeah, there's no doubt about that. No doubt about that.

PRESIDING COMMISSIONER ROHY: That's a requirement by state law that any proposal would have to meet.

MR. DeANGELIS: No doubt about that.

I think part of the issue was that we were recognizing that we were going to try a substantial amount of state law in the contract streamlining.

PRESIDING COMMISSIONER ROHY: But some will remain.

MR. DeANGELIS: Right, right.

PRESIDING COMMISSIONER ROHY: So the intent was there

that it's in there.

Comments anyone else?

Been a very good day. Enjoyed you all being here. The hearing is adjourned.

[Whereupon the hearing adjourned at approximately 3:45 P.M.]

CERTIFICATE OF REPORTER

I, **S. RICE**, a duly commissioned Reporter of **CourtScribes**, do hereby declare and certify under penalty of perjury that I have recorded the foregoing proceedings which were held and taken at the **CALIFORNIA ENERGY COMMISSION** in Sacramento, California on the **17th day of April 1997**.

I also declare and certify under penalty of perjury that I have caused the aforementioned proceedings to be transcribed, and that the foregoing pages constitute a true and accurate transcription of the aforementioned proceedings.

I further certify that I am not of counsel or attorney for any of the parties to said hearing, nor in any way interested in the outcome of said hearing.

Dated this **22nd day of April 1997** at Foresthill, California.

S. RICE, CER 00160